Det. Bel. Isle & Windsor Ferry Co

*DEVOTED TO NAVIGATION, COMMERCE, ENGINEERING AND SCIENCE.*

VOL. XI. NO. 7. CLEVELAND, O., FEBRUARY 14. 1889. $2.00 PER ANNUM SINGLE COPIES 5 CENTS

## *AROUND THE LAKES.*

CLEVELAND, OHIO.

Capt. Thomas Jean and Wm. McCormick, of Bay City, were in the city looking after the purchase of a steambarge to carry lumber.

Captain Peter Edgar, who has sailed the schooner Thomas H. Cahoon for the past seven years, will sail the same vessel again this year.

It is not thought here that any more ore charters will be made right away. The $1.25 rate from Lake Superior, said to have been made with the Hill boats, is declared too low.

The twenty-fifth anniversary of the order of K. of P., under the auspices of the Second Ohio regiment, will be held at the Red Cross Armory on Tuesday evening, February 19th.

Captain H. W. Bogart will sail the propeller B. W. Blanchard next season, and Captain Norris, who sailed the schooner R. B. Hayes some time, will command the propeller H. A. Tuttle.

John Warner has purchased the schooner Joseph Paige outright. He has added Mr. Axworthy's interest of three fourths to the quarter which he held, at about the origanal cost of the boat.

The secretary of War has appointed Gen. O. M. Poe, Maj. H. H. Adams, Maj. C. J. Allen, of the engineer corps, a commission to investigate as to the advisability of bridging the Detroit river.

We wish to correct an error which appeared in our last issue. We stated that the barge being built for Pennington and others, was located at Trenton. We have since learned that R. W. Linn, Gibralter, Mich., is the builder of this vessel.

Captain M. M. Drake and Joseph R. Oldham, civil engineer, are in the city acting as inspectors for Inland Lloyd's register. Under the eyes of these gentlemen, vessels of all classes will get the rating due them and nothing more or less.

We take pleasure in recommending the Mount Olive Erasive Liquid, manufactured by Captain D. A. McLachlin, for cleaning varnish and painted articles without injury to the polish. Price 40c per gallon. Address the Captain at No. 633 Trumbull ave., Detroit, Mich.

It is also understood that Wolf & Davidson of Milwaukee have on hand a contract to move 100 000 tons of ore from Escanaba to Ohio ports, the freight being $1.10. This is 10 cents better than the rate on the first contracts made last season, but it is not up to the price which had been looked for by carriers.

Meteorological summary for the week ending February 12, 1889:

| | |
|---|---|
| Mean barometer | 30.00 |
| Mean temperature | 20 1 |
| Mean humidity | 78.7 |
| Total precipitation | .38 |
| Prevailing direction of wind | West |
| Total wind movement, miles | 2244 |
| Average cloudiness | 8 6 |
| Average state of weather | C'dy |
| Max. temperature, (highest) | 33 8 |
| Min. temperature, (lowes) | 1.2 |

W. H. HARMON, Sergeant Signal Corps.

It is learned that one of the largest iron-ore companies has made a contract with a line of steamers to carry a big block of ore from the head of Lake Superior to Lake Erie ports at $1 25 a gross ton. The name of the carrier is not given, but it is believed to be James J. Hill, manager of the Northern steamship company. That company owns six large steel steamers, two of which are not yet finished. All, however, will be ready for business by the opening of navigation. This rate, $1.25, is the same as was paid on the first contracts made one year ago, but it is lower than vessel men had figured on for the coming season.

The keel of the new steamer which the Globe Iron Works Co., have contracted to build for Ira H. Owen, will be laid at once on the blocks which the North Shore has just vacated. The dimensions of the new steamer are, keel 262 feet, over all 276 feet, beam 38 feet, molded depth 23 feet. Compound engines, cylinders 28 and 50 inches, with a 42 inch stroke, boilers 9 feet 6 inches in diameter, length 16 feet. As announced in a previous issue she will be ready by August 1st.

Mr. Henry Leopold, who established business in this city in 1859, as a manufacturer of furniture upholstery and mattrasses, and who has since made a specialty of supplying vessels, has grown into prominence, as a leader in this line of business, that is, fitting out vessels. If masters of vessels, steam or sail, want good service in upholstery, comfort, or convenience, they should call on Mr. Leopold to have their work done. A visit to the cabins of the Philip Minch, or the reconstructed Specular, will convince any one that the work of this firm cannot be improved upon. The offices, manufactory and warerooms of this firm are at 794 to 800 Lorain street. Any one wishing to get estimates on furniture and mattrasses for vessels or house work, will do well to call on Mr. Leopold as he assures us that with his facilities for doing work somewhat cheaper than any of his competitors, it will be to their advantage. Remember the place, 794 to 800 Lorain street, city.

CHICAGO, ILL.

*Special to the Marine Record.*

The tug L. B. Johnson owned by Jacob Johnson, has received a thorough rebuild. She will receive an engine 22 by 22. Her boiler is having a thorough overhauling, and when completed she will be as good as new and rate A1.

Captain J. B. Carter, last year of the tug Wau Bun, is in Buffalo on business connected with the Chicago towing company.

Two dredges are being constructed for the improvement of the Calumet river by the government. The work of deepening and widening the stream will commence in May.

The schooner Adirondac, owned by the T. W. Harvey lumber company, will be thoroughly overhauled under the superintendence of Captain Stubbs.

Jay Norton & Co., are about to remove their salt docks from the Calumet river to Chicago. The excessive charges of the Belt Line for freight carrying constitute the cause of the removal.

L. T. Sullivan, G H. Berriman, and Capt. E. Winchester, of Toledo, have bought the Manitowac schooner C. C. Barnes for $17,000. She is laid up here. Captain Winchester will sail her. WILLIAMS.

DETROIT, MICH.

Captain Millen, when shown the dispatch from Buffalo stating that the Lake carriers' association had asked his resignation, said: I expected it. I'm not in sympathy with the association in a good many things, in fact have been opposing it in almost everything lately. To begin with the members wanted to send a man with a salary of $5,000 to Washington to lobby for the association. I opposed that. Then came the winter bridge matter. I spoke very forcibly in its favor. There is no reason from a common sense standpoint, why that bridge should not be built as proposed with 1,000 feet clear passageway through it during navigation, and counting the draw on the Detroit side, 1,800 out of 2,000 feet.

"The time is coming when the Detroit river is going to be bridged. It has got to be done, and the sooner the better for Detroit. The association wanted to prohibit rafts on the lakes. I wanted only to restrict their size. I, too, opposed lighting the Sault river at night as the river is too dangerous to be navigated except by daylight, so that I am generally on the opposite side, you see, and when a notification reaches me that my resignation is desired it will be forthcoming"

The appointment of Gen. Poe on the commission to examine into the matter of bridging Detroit river will be eminently satisfactory to everybody who wants a fair, just, and able report. As to those who want any other kind of a report, it is immaterial whether they are satisfied or not.

D. Whitney of Detroit has sold to Captain Truman, Moore and others of Lorain, O., the schooner H. W. Sage, the consideration being $26,000. She has been thoroughly repaired since her collision last fall with the steamer Lansing She carries 1,400 tons and will be commanded by Captain Moore.

BUFFALO, N. Y.

*Special to the Marine Record.*

The steamship Roamania is having some calking done here. Captain J. R. Cowley, who is now in this city, will command her the coming season. Engineer Welch, who was with Captain Crowley on the steamship Bulgaria last season, is also here. He will go on the Roamania next season.

Captain Joseph Hulligan, last season on the steamer Grand Traverse, started Tuesday evening on a pleasure trip to New York and Boston.

H C. Felthousen and wife, started for California last Friday on a pleasure trip.

W. C. Russel is confined to his residence with a badly sprained knee.

J. J. H. Brown, vessel agent, and wife are in Washington on a pleasure trip.

The steamer T. W. Palmer of Brown & Co's fleet, has been re-named the "Samoa."

Monday afternoon Reuben Dolph, a carpenter working on the Delaware and Lackawana Co.'s new coal shutes at the foot of Erie street, fell from one of the shutes and was instantly killed; his neck being dislocated

We regret to know that Captain J. Bourkland who commanded the schooner David Vance last season, is suffering from a bad attack of pneumonia.

Referring to the statement of Captain J. W. Millen that he was opposed to the Lake Carrier's association sending a lobbyist to Washington, Captain W. P. Henry says: "The Lake Carriers never had any idea of sending a man to Washington to lobby in their behalf. Congressmen and senators know very little about lake transportation, its importance or its needs. A competent, reliable man was sent there by the lake interests to watch legislation bearing on them, and to explain to members such matters as they did not understand. No such thing as lobbying was thought of. The presence of our representative has had a salutary effect. Captain Millen at that time was in favor of a bridge over Detroit river, and it is understood that he was then in Washington working in its behalf."

Captain Henry is one of the managers of the Lake Carrier's association. Captain Millen has been a manager since its organization, but his resignation is now asked for on account of his advocacy of a low winter bridge over Detroit river. He says he is perfectly willing to resign.

The annual meeting of the Inland Lloyds was held at the office of Manager Bates, and all arrangements for the coming season were made in a spirit of the utmost harmony. The usual assessments were made and the register will be issued about the first of April without change of style. The agents in attendance represented all the interests directly connected with the publication of the Lloyds. They were Messrs. O. T. Flint, Townsend Davis, H. S. Sill, and P. W. Bullard of Buffalo, the latter representing David Vance & Co., of Milwaukee; Thomas G. Crosby and C. W. Elphicke of Chicago; J. J. Clark and Eugene Harbrecht of Detroit, the latter being agent for the newly admitted Michigan Fire and Marine Co., and George Tisdale of Cleveland. No change whatever was made in the arrangements and the meeting was largely a matter of necessary form. The election replaced all the old officers as follows: President, O. T. Flint; vice president, Thomas G. Crosby; secretary, and treasurer, Henry S. Sill; manager, W. W. Bates; executive committee, Townsend Davis; chairman, H. S. Sill, O. T. Flint, G. W. Franklin, J. J. Clark.

The Union Dry dock company has taken a contract to build a new steel steamer for Fletcher & Gilchrist of Alpena. She will be 200 feet long and 37 feet beam and will be adapted for the general lake trade. Work will begin at once and the steamer will be finished as soon as possible.

John Kumbach and others of Toledo, have bought Thomas M. Ryan's schooner, George Clinton of Buffalo, for $5,500.

The ice in the creek has become so thick that the crew of the fire tug have had to give up keeping a channel open. Foreman Phillips and Captain Welch have been well pleased with its work, they having succeeded in breaking through eight inches of ice. The ice in the canal will be kept open as long as possible, and when compelled to lay up the boat will be held at the Commercial slip, from whence a large territory can be covered.

W J. Sandrock has been appointed agent of the companies held by David Vance & Co. Mr. Vance is expected to bring back from Europe the general agencies of several companies. Captain Demus Sullivan will go with Vance & Co., as marine inspector.

None of the Lehigh Valley captains will be dropped, so Manager Henry says, but two new ones will be appointed on acconnt of the addition of new boats to the fleet.

The Board of managers of the Lake Carrier's association met last Friday A resolution was adopted, asking for the resignation of Captain James W. Millen of Detroit as a manager, on account of his connection with the Peninsular Bridge Co., which has in view the bridging of Detroit river. At the recent annual meeting in Cleveland of the Lake Carrier's association, a unanimous vote was had against this bridge scheme. Captain Millen there argued that no hindrance to navigation would result from a bridge, but as all the other members differed with him on this matter, he did not vote when the question was put.

The managers adopted a vigorous protest against the passage of the Saturday holiday bill now before the Legislature It was held that the closing of the banks from Friday afternoon till Monday morning during the busy months of June, July, August and September, would entail serions loss to the shipping interests.

The Union dry dock company have contracted to build for Gilchrist & Fletcher of Alpena, a steel steamer, 200 feet keel, 215 feet over all, 37 feet beam, 14 feet hold. She will have a fore and aft compound engine, 26 and 46 by 42, and Scotch type boiler 12 by 12½ feet. She is to be completed by August next.

The fine steel steamship building for Kelderhouse, Maytham and others, by the Union Dry Dock Co.; is in frame and more than one half plated. She is 275 feet keel, 293 feet over all, 40 feet beam, 24 feet hold. She will have a fore and aft compound engine 28 and 53 by 48, to be built by Trout, King Iron works, and two Scotch type steel boilers 12 by 12 each, to be built by the Lake Erie boiler works. She will be completed about June 1st.

The steamer Nebraska is in one of the Union company's dry docks receiving a rebuild, and will receive new steel arches inside, to replace her wooden arches.

The steamship H. G. Jewett is in dock where she has received some new steel plates to repair the damage done by collision with the steamship Veronica last season.

Captain Harry Richardson, who has been attending to business connected with the building of Gilchrist & Fletcher's new steel steamer, by the Union Dry Dock Co., left Buffalo Wednesday night.

WEST SUPERIOR WIS.

*Special to the Marine Record.*

The chances for lake freight from this point may be of interest to your readers at the present time. Last season the receipts of coal at West Superior docks was 755,000 tons, 25,000 barrels of salt and several thousand tons of railroad iron wire also received, the shipments were between six and seven million bushels of grain. During the present season we cannot expect to ship as much grain by one half, owing to the failure of crops in Dakota, but the Manitoba railway by its Lake Superior terminal branch, the Eastern Railway of Minnesota, will ship more than enough flour to compensate for the loss of the wheat, besides making arrangements to handle considerable package freight. As to the coal shipments here the old docks (the Lehigh, 350,000 tons, the St. Paul and Pacific, 225,000 tons, Northwestern Fuel Co., 120,000 tons and the Ohio Coal Co., 60,000 tons) will not receive much over one-half of the amount taken during the season of 1888, owing to an extremely mild winter, although the Lehigh and the Northwestern will use the larger half of their last years receipts. In addition to these docks the Eastern railway is having built two docks which will be the largest coal docks in the world 2100 ft long, with a slip between 145 feet wide, the one on the east 355 feet wide and the other 300 feet which, it is estimated, will hold 1,000,000 tons of coal. One half of each of these docks is to be ready for the receipt of coal by June 1, this year, so that the outlook now is that the coal receipts will be about 900,000 tons or an increase of about 25 per cent. The Lehigh company are operating a plant of 50 coke ovens which will be increased to 200 this summer and it will take at least twenty full cargoes to bring up the necessary fire-brick etc., for them. The Lake Superior Oil company has established a depot here and received 1100 barrels of oil last fall before the close of navigation and expect to receive large quantities this season. The St. Paul, Minneapolis and Manitoba road (the "Man itoba") will have six elegant freight steamers running this summer under the name of the "Northern Steamship Co." and they have made arrangements to carry a large quantity of through freight from Buffalo, for convenience in handling which they have had steam hoisting gear put into them this winter. I could fill several more pages about improvements going in here on the water front but I am afraid you will be exhausted by the time this is perused so will bring it to an abrupt close. F. P. H.

ERIE, PA.

A painful accident occurred to an ice boat load of government employes Saturday. Captain Clarke, superintendent of the life saving station, and lighthouse keeper Coyle were the principal victims. The boat, which was flying at a high rate of speed, struck a cake of ice. Captain Clarke's injuries were of a very dangerous character, being about the head and body His arms and legs were also injured. Mr. Coyle, who is a one-legged solder, had the other leg broken and was otherwise injured.

MARINE CITY, MICH.

The annual meeting of the Marine Transit company was held at the office of W. C. Roberts at Roberts' landing on Tuesday. The old corps of officers were re elected, the number of directors being increased from five to seven and M. Sicken and John Drawe elected. The capital stock of the company was increased from $50,000 to $100,000. The company will continue building at their yard in this city, putting on another boat as soon as the present one is launched.

The annual ball of the marine engineers occurs on Wednesday evening, February 20. The boys have the reputation of getting up one of the most suecessful entertainments of this class ever given in this city, and they are making special efiorts to make this surpass all previous balls given by them. They have arranged for a supper at the Commercial house, and have placed the bill at 75 cents, with supper at 75 cents per couple additional. It is expected that delegations will be present from Port Huron, St. Clair, and several other places.

PORT ARTHUR ONT.

During last season of navigation the C. P. R. brought into this port 83,000 tons of coal. In the season of 1887 they brought in about 50,000 tons and were much short. This year less than 30 000 tons of the 83,000 will be used and this will make a tremendous difference to the vessel trade in the coming season. It is possible that the C. P. R. will get in no coal this year and certainly 20,000 tons will cover the amount.

ALEXANDRIA BAY, ONT.

W. H. Visger is putting in two large docks for C. J. Singer of Chicago, on his island.

Today while drawing stone for Singer's dock, Henry Hunt and team broke through the ice. They were soon rescued only losing the stone.

[CONCLUDED ON FIFTH PAGE].

## MARITIME LAW.

TUG AND TOW—STRIKING OBSTRUCTION PREVIOUSLY UNKNOWN—LIABILITY.

*U. S. District Court, Southern District of New York.*

Libellant's canal boat was injured in the bow, while in tow of the tug Blue Bonnet, and by striking something while being brought up to a pier. The evidence seemed to indicate that the stones which formed the interier of the pier, occasionally worked out beneath the water line from the impact of many boats, and that it was by striking such a stone that libellants boat had received its injury. As, therefore, the damage was occasioned by an obstruction previously unknown, held, that the tug was not liable for the damage.

BROWN, J.

The libellants canal boat Edith, on the morning of September 20th, 1887, had two planks broken a little under the turn of her port bow, while in the tow of the tug Blue Bonnet, which was engaged in distributing a tow near the Morris street dock. The injury must have been caused by running the Edith either against one of the loose piles along the end of the old Game Cock pier, so called, or else, as claimants contend, against a rock between the spring piles and just outside of the end of the pier. The Edith was the second boat on the port side of the tug. The libellant was at the time standing at the port bow to put in a fender, which was crushed by the spring piles as the boat came alongside the pier; and he was the only person that was in a position to form any correct judgment at the time as to the cause of the break in his boat. His testimony is that he believes the hole to have been made by a rock, between the spring piles. Subsequent soundings both by the libellant's and claimant's witnesses showed that there were rocks there, and, upon the whole testimony, I feel bound to accept that as the most probable explanation, notwithstanding the ingenious questions and doubts thrown upon the matter by the libellant's counsel, I have no question that the pier was always considered safe, and that boats in great numbers, and at all times, had been accustomed to move along the front freely, and that there was no previous knowledge, or suspicion, of danger there for boats like the Edith. The end of the pier was a crib, filled with stones. Mr. Starritt's testimony is to the effect that the lower part had become decayed, so as to show a large hole at and below low water line. Nothing would therefore prevent stones from the inside gradually working out under the impacts and shocks of so many boats as frequent the pier. Such stones would naturally work gradually down the deeply shelving bottom. That such changes in the position of the stones was going on appears from Mr. Starritt's testimony that a rock found close to the upper corner in one souding had disappeared on another sounding soon after. The rock against which the Edith's bow struck may have been working out from above the lowest log, and may not have been on the bottom when struck, but fallen afterwards, and worked down. This is doubtless mere conjecture, but a sufficient answer to conjectural questions. As the presence of rocks on the bottom is proved by the soundings taken soon after this injury, and as it is difficult to see how the breaking of the two planks under the bow, without additional injury to the Edith could have been brought about by contact with the spring pile, which is proved to have stood very nearly perpendicular, I must find that the damage was done by rocks, an obstruction previously unknown, and for which the tug is not answerable. The libel must be dismissed, but under the circumstances, without costs.

October 22, 1888.

SEAMAN'S WAGES—MARITIME LIEN—BRICK SCOW—LOCAL USAGE AS TO DISCHARGE—HOW FAR IT EXTENDS.

*U. S. Circuit Court, Southern Disirict of New York.*

1. Men employed to handle brick on a scow which has neither masts, sails or rudder, but who attend to the duties, though slight, incidental to her navigation, perform maritime services and have a lien for them on the vessel.

2. While the contract of seamen employed about the harbor of New York, may, upon proof of local usage, be determined at the end of any trip and a pro rata recovery be had, their right to discharge extends no further.

BROWN, J.

The libellants sue for wages and claim a lien as seamen on board the barge Walsh Brothers. The barge had no sails, masts or rudder; she was used only for the transportation of brick. The libellants were hired for service on the barge, including loading and unloading, in transporting brick from Hackensack to New York and Brooklyn, at the rate of $35 per month, no further engagement for any definite period being agreed on. They made several trips between May 15th and June 19th, 1888, and on the day last named, while the barge was discharging brick at 91st street, New York city, they quit work, on account of some dissatisfaction with the alleged language and behavior of the master.

The services of the men constitute a lien upon the barge, because she was a vessel engaged in the transporation of cargo; the men lived on board, and though their duties as respects navigation were slight, they did attend to all such duties as were incident to such trips when the barge was taken in tow by the tug; and they were not employed in any other duties upon land excepting such as belonged to the loading and unloading of cargo. Such services are all maritime, and are attended by a lien upon the vessel. See the Minna, 11 Fed. Rep. and note.

The men were not discharged by the master; nor can I find that they left with his assent. He wished them to remain until the cargo was unloaded. Though their engagement was by the month, they did not thereby forfeit their pay for the fractional part of the second month, so far as they finished trips of the barge.

In Moore v. Neane, 3 Fed. Rep. 650, it was held by Judge Choate, upon proof of the local usage, that upon engagement of seamen at so much a month for service about the harbor of New York, the contract might be terminated at the end of any trip, and a pro rata recovery had. The right of the employer to discharge or of the employed to quit, extends no further. It would be contrary to the manifest meaning and intention of such an employment that either party should be at liberty to terminate the agreement at any moment in the course of an uncompleted trip. (The City of New Orleans, 33 Fed. Rep. 683). The causes assigned by the libellants for leaving in the midst of unloading do not amount to a justification. They were legally required to remain and finish the unloading. The chief part of their work was loading and unloading the cargo. To quit work as they did was to subject the barge to the liability of special expenses, whether she undertook to get other persons to supply libellants' places, or undertook to discharge without their aid, and thereby lose two day's time. The libellants must therefore, either suffer a deduction for the special damage, or forfeit any claim to wages for that trip. The former is all the deduction claimed by the respondent. The amount claimed is no more than his probable actual olss, and is less than the forfeiture of the wages for the trip would be. I deduct the lesser sum of $4 75 from each man. Judgment is allowed for the rest.

October 22, 1888.

## AN OLD TIMER.

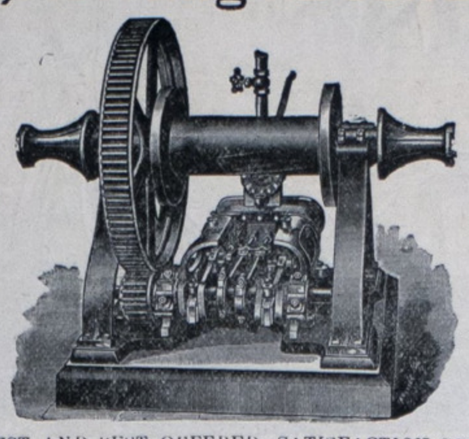
SOMBRA, ONT., February 4.

*To the Editor of the Marine Record.*

You have kindly made mention of me looking over the water. Well, as you have called the watch, I am on deck to heave short. I came to anchor here in Sombra, one mile above Marine City. I can see all steamers and vessels that pass going to the upper lakes. I have a nice farm and all the gear needed to make a cruise; a nice team, plows and harrows, cultivators, seeders, mowing machine, horse rake, a reaper. self binder, wagon and sleighs; and my cable is long enough to allow me to attend to all these duties I have a large crew of cows that are very tame and kind, and will follow me all around the farm. They will not associate with other cattle; they think their home is the dearest place on earth. The reason I came over here, I could get a farm cheaper near the river; the people are kind here, and the land is better than across the river. I enjoy myself here in this ship, and every night it is my watch below. With my sincerest thanks, and with the compliments and best wishes of the season, I send to all my friends wishing them long life and happiness. I am glad to hear that Captain W. Bradford will open a nautical school; every young sailor should learn navigation. I have two nice sextants, I will sell cheap; and Bowditch's navigator, Norie's epitomes, Thompson's tables, and Nautical almanac bound, of same date. It is nice to learn to find the latitude by observation. Running on Lake Michigan, it is so near north and south, by getting latitude at noon, if off in the lake, you could tell how far off was Chicago, or distance to any light house. A light house book has the latitude and longitude of each light on the lakes. I helped get up a school on the west side, and Captain A. Manning and his brother learned navigation in one winter. They were both masters of vesselg to Europe, and clever men. Captain Randall of Cleveland, learned in the same school. I once was in Buffalo, and called at Captain Dorr's office. There were six other captains there, some to get charts, and one to enter protest, his vessel on a shoal. Captain Dorr told him to locate the shoal, and give the bearing and distance from Beaver Island. There was none could do it. Captain Dorr then says: "Gale locate that shoal." I did it in two minutes. All sailors should learn to find a course from a chart, and the bearings of two places will give the distance from them.

The schooner John F. Warner, that was owned by Mr. T. P. Handy, (I took her to Liverpool in 1858), is now owned by Mr. Walker of Marine City, and is a good craft yet. Steamer Mary is still making daily trips. I am 74 years of age and can do all kinds of farm work. My consort is 68. She is well.

CHARLES GALE.

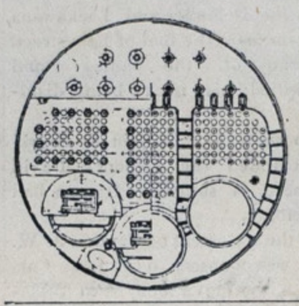
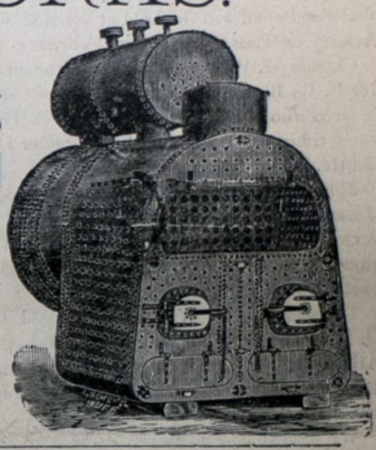

EAGLE IRON WORKS,
MANUFACTURERS OF
Duplex, Hoisting & Deck Engines
Specially adapted for Boat uses, Raising Sail, Hoisting Anchor, Pulling in Tow Line etc., etc.

Pumps with ten inch Barrels Connected to Gypsy Spools.
THE SIMPLEST AND BEST OFFERED—SATISFACTION GUARANTEED.
SUBMERGED FLUE BOILERS
Engines, Boilers and Pumps on Hand for Prompt Shipment
CIRCULARS AND PRICES ON APPLICATION.
Woodbridge, Fifth and Congress-sts, Detroit, Mich.

Forest City CIGAR STORE
THOMAS LIGGET, Prop'r.
MANUFACTURERS AND JOBBERS
CIGARS AND TOBACCOS.
259 PEARL STREET

Cleveland Block Co.,
MANUFACTURERS OF
Iron Tackle Blocks
TAKING THE PLACE OF WOODEN BLOCKS FOR ALL PURPOSES.
159 St., CLEVELAND, O

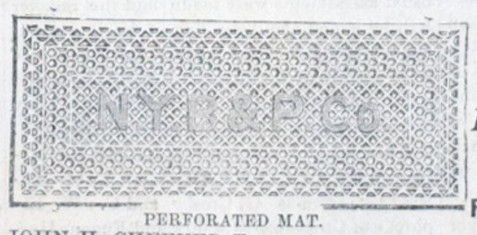
WARD AND JACKSON,
Shipsmith.
All Kind of Forgings, Bolts and Truss Rods for Building.
49 Main-st Cleveland

SAMUEL McCUTCHEON,
STEAMBOAT & ENGINEERS' SUPPLIES
Copper, Brass and Sheet Iron Manufactory.
IRON PIPE AND FITTINGS.
Agent for Davidson's Steam Pumps, Amazon Boiler Compound, and Orme Patent Safety and Relief Valve.
No. 18 Ohio Street, Buffalo, N. Y.

EAGLE BOILER WORKS.
M. RITER, PROPRIETOR,
Cor. Indiana and Mary St., Buffalo, N. Y.

The Latest Improved Hydraulic Machinery
USED IN ALL CLASSES OF WORK
Marine, Stationary, Portable, Locomotive and Upright Boilers; also, Salt Pans, Smoke Pipes and Heavy and Light Plate Iron Work of all Descriptions.
REPAIRS PROMPTLY ATTENDED TO.


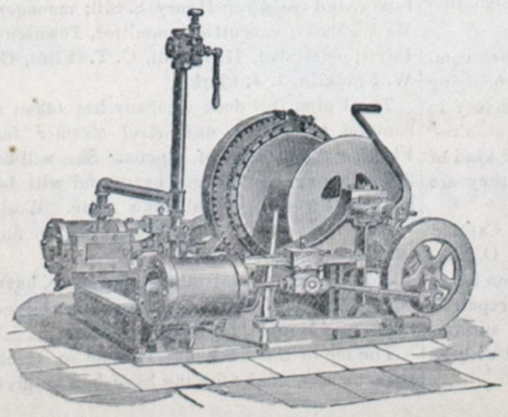
CORRUGATED FLUES FOR STEAM BOILERS.
ALL SIZES AND WITH FLANGED OR PLAIN ENDS.

Manufactured SOLELY IN THE UNITED STATES UNDER OUR OWN PATENTS AND THOSE OF Samson Fox, OF Leeds, England.
Take 10th or 23d Street Ferries from NEW YORK to GREENPOINT.
THE CONTINENTAL IRON WORKS,
THOS. F. ROWLAND, President.
WARREN E. HILL, CHAS. H. CORBETT, } Vice Presidents.
THOS. F. ROWLAND, JR., Treasurer.
BROOKLYN, NEW YORK.

THE NEW YORK BELTING AND PACKING COMPANY.


PERFORATED MAT.
Vulcanized Rubber Packing of Every Description.
RUBBER MATS AND STAIR-TREADS
For Halls, Floors, Decks and Companionways,
Rubber Belting, Packing and Hose.
FIRE TEST HOSE FOR STEAMBOATS & TUGS.

STEAM HOSE.
JOHN H. CHEEVER, Treas., J. D. CHEEVER, Dept. Treas. } WAREHOUSE: 15 PARK ROW, NEW YORK.
308 Chestnut st., Philadelphia. 52 and 54 Summer st., Boston. 203 Nicolet ave., Minneapolis. Cor. Wazee and 17th sts., Denver, Col. Post & Co., Cincinnati, O. Arnett & Rivers, 17 and 19 Main st., San Francisco. 151 Lake st., Chicago.
☞European Branch: Pickhuben 5. Hamburg (Freihafengebist), Germany.

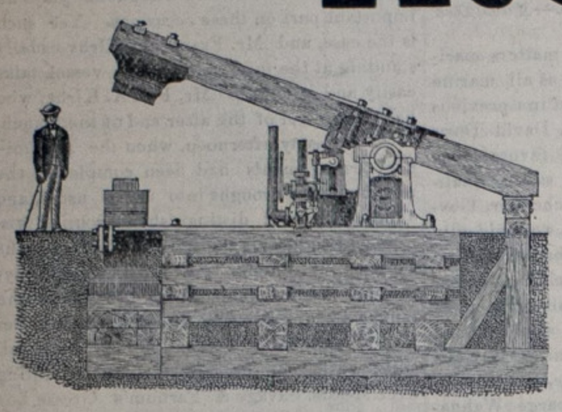
LIDGERWOOD MANUF'G COMPANY, 96 Liberty-st. New York.

MAKERS OF
HOISTING ENGINES.
FOR VESSELS AND DOCKS.
DECK HOISTS A SPECIALTY.
Engines & Boilers Combined FOR DOCK HOISTERS
ALSO, Superior Marine boilers
WHARF AND WORKS, SOUTH BROOKLYN, N. Y.

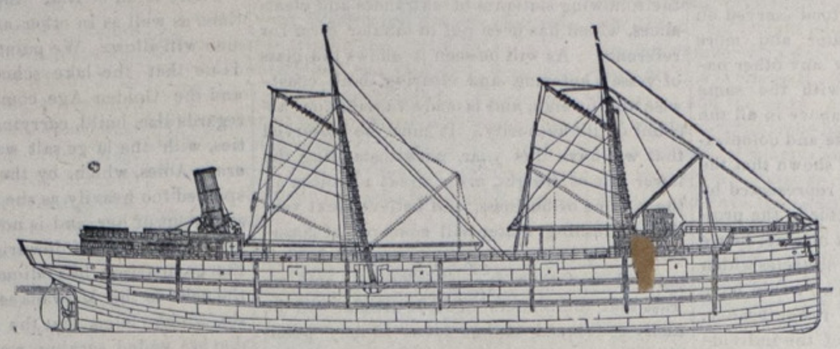
H. D. COFFINBERRY, PRES'T. ROBERT WALLACE, VICE PRES'T. WM. M. FITCH SEC'Y.

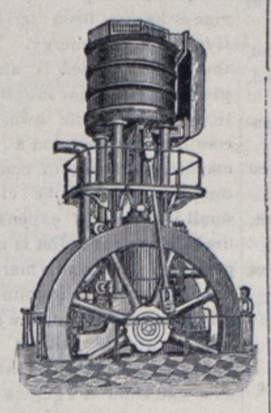
# THE CLEVELAND SHIP-BUILDING COMPANY,

## Detroit and Center Streets, Cleveland, Ohio,

## IRON SHIPS.







## Marine and Stationary

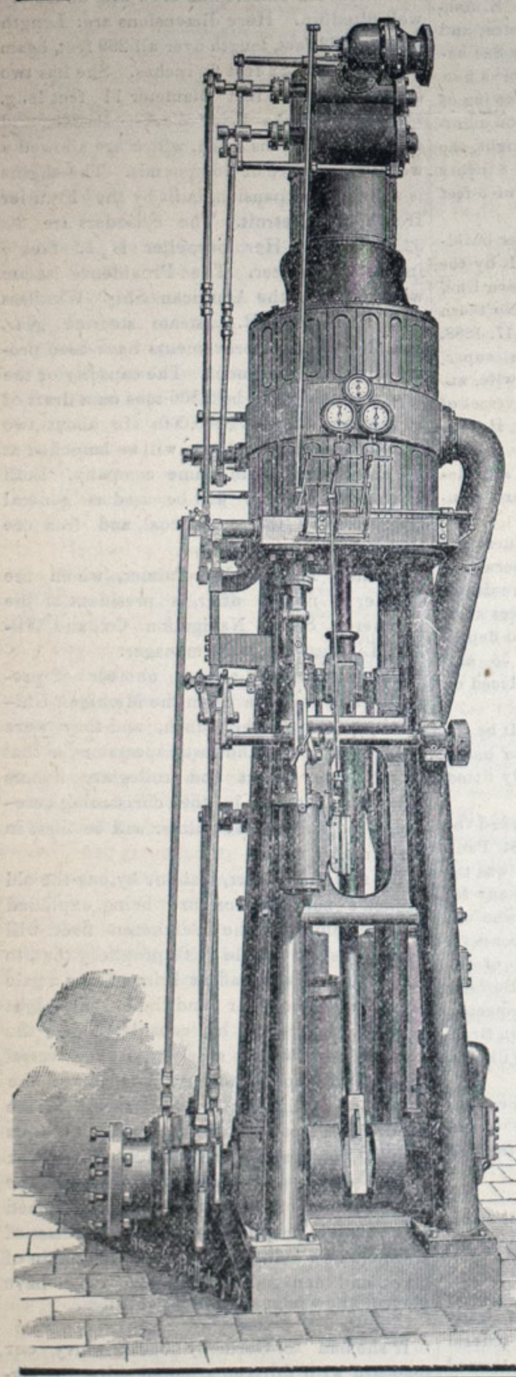
# ENGINES AND BOILERS,

## Blowing Engines and Steam Hammers,

## MILL GEARING AND CASTINGS.

**Repairing and Jobbing Solicited. Office on Viaduct.**

# PHŒNIX IRON WORKS.



**Manufacturers**

OF

**STEEPLE, FORE AND AFT COMPOUND & TRIPLE EXPANSION**

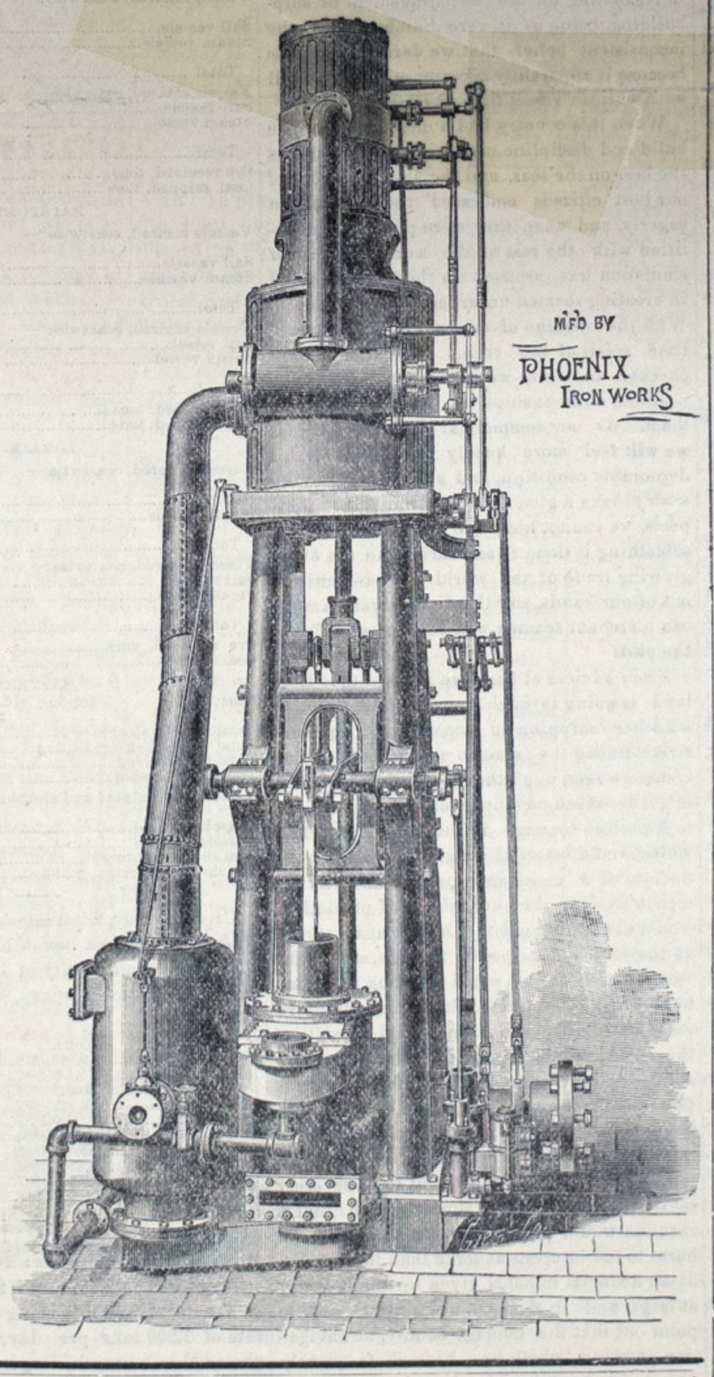
MARINE ENGINES,

**WITH BOILERS**

OF

**MODERN DESIGN.**

**PORT HURON, MICH.**




---

**A. J. MORSE & SON.**

DIVING APPARATUS

140 CONGRESS ST. BOSTON.

**GEORGE SAAL'S SON.**

Copper-smithing of all Kinds.

VESSEL WORK A SPECIALTY.

313, 315 and 317 Detroit-st-

Telephone 1638. CLEVELAND, O.

**DOWNIE EUCALYPTUS** Boiler Scale Preventive and Remover.

PATENTED IN ALL THE PRINCIPAL COUNTRIES IN THE WORLD.

**Manufactured by the DOWNIE B. I. P. Co.**

204 MARKET-ST. SAN FRANCISCO. Branch Office, 4 Red Cross-st Liverpool

This extract from the leaves of the Eucalyptus tree, has been adopted and is now in use by most of the American SS lines, the U. S. Navy, and the largest stationary plants in the country. Send for pamphlet, containing letters from prominent engineers directions for use, price, etc.

DELAFIELD, MORGAN, KISSELL & CO., Agts., 74 HUDSON ST. NEW YORK.

---

VESSEL OWNERS AND AGENTS.

ESTES & WALKER,

**Ship and Coal Brokers,**

VESSEL AGENTS AND OWNERS.

Marine insurance and collections. References Moss and Third National Banks.

602½ Water street, SANDUSKY, O.

**THOS. WILSON**

MANAGING OWNER

**Wilson's Transit Line.**

Gen. Forwarder. Freight and Vessel Agent.

CLEVELAND, O.

MOORE, BARTOW AND GILCHRIST,

**Ship Brokers and Agents,**

No. 101 St. Clair Street, Room 15.

CLEVELAND, OHIO.

**PALMER & BENHAM,**

**Vessel Owners & Agents,**

New Bank Building, corner of Superior and Bank Street, Cleveland, Ohio.

**C. J. MAGILL,**

VESSEL AGENT,

Vessels Chartered, Bought and Sold, Lake Freights and River Tow Bills Collected and promptly remitted.

94 Board of Trade, Chicago, Ill.

C. W. ELPHICKE. JAS. A. MYERS

C. W. ELPHICKE & CO.,

Vessel Agents

AND

**MARINE UNDERWRITERS.**

6 and 8 Sherman St.,

Rooms 10 and 11 Parker Block. CHICAGO, ILL.

*ALEX McDOUGALL,*

**VESSEL AGENT AND BROKER,**

Duluth.

Owners and masters of vessels wishing to get cargoes of grain from this port will do well to confer with me. Will be glad to furnish information in regard to cargoes, also in relation to docks, depth of water, etc., at **Duluth, Agate Bay** (new iron ore port), **Port Arthur, Washburn, Ashland,** and all points near the west end of Lake Superior. Good gangs of men furnished on short notice for trimming cargoes of grain, loading and unloading all kinds of freight.

*JAMES T. ROSE,*

**Vessel Agent and Broker,**

*Marine Insurance,*

Room 6, Exchange Building, Duluth, Minn. I have an excellent gang of Trimmers this season, Captain Miller's old Crew.

Special Attention Paid to Chartering Vessels, and seeing that they get dispatch in Port.

CORRESPONDENCE SOLICITED.

*H. J. WEBB & CO.,*

**Ship Brokers, Vessel Owners and Agents.**

[ESTABLISHED IN 1856.]

H. J. WEBB & Co., will charter Vessels for Lake Trade, special attention given to Chartering Vessels in the Lake Superior Iron Ore Trade, both for the season and single trip.

ARCADE BUILDING, 101 ST. CLAIR ST., Room 27. Cleveland, Ohio.

TELEPHONE { Office, No. 338. Residence, No. 1328.

*WARNER & BECKER,*

**Vessel Agents and Brokers,**

ROOM 10,

Arcade B'ld., 101 St. Clair St,

CLEVELAND, OHIO.

J. J. H. BROWN. EDWARD SMITH.

*BROWN & CO.,*

**Ship Brokers and Agents.**

Special Attention given to Surveying, Appraising and Settling Marine Losses.

Exchange Building, 202 Main-st., Buffalo, N. Y.

**River Machine Co.,**

[Successor to G. R. GALE,]

*171 River St., Cleveland, Ohio,*

Are prepared to Manufacture and do General Repairing on Marine Engines and all other Machine Work.

We have also a full line of pulleys and shafting and are prepared to do all kinds of Stone quarry Work.

TEARE, WIGHT & CO.

**ROBERT E. HILLS,**

57 & 59 North Wells St., Chicago, Ill.

Telephone 3321.

STEAM FITTING AND HEATING,

Wrought Iron Pipe & Fittings

ENGINEER'S SUPPLIES.

General Jobbing Work Done Promptly.

Also, Proprietor of North Side Brass Works

*WM. H. DeWITT,*

Attorney and Proctor in Admiralty.

ROOM No. 6, BLACKSTONE BLOCK.

CLEVELAND, OHIO.

**MULLEN & CO.,**

DEALER IN

COAL.

Docks at Government Pier, Whiskey Island, and South Main Street Bridge.

Office, 81 Perkins Building, East Side of Main Street Bridge, CLEVELAND, OHIO.

Telephone No. 8.

BOATS COALED DAY OR NIGHT.

# Marine Record.

Published Every Thursday at 144 Superior Street, (Leader Building) Cleveland. O.

A. A. POMEROY, EDITOR AND PUB

BRANCH OFFICE:
252 South Water Street, Chicago, Illinois.
THOMAS WILLIAMS, Associate Editor.

TERMS OF SUBSCRIPTION:
One year, postage paid.....$2.00
Six months, postage paid..... 1.00
Invariably in advance.

THE MARINE RECORD can be found for sale by the following news dealers:

CLEVELAND, O.—G. F. Bowman, corner of Pearl and Detroit Streets.
Evans & Van Epps, Superior street, Cleveland.
R. A. Castner, 254 Detroit street, Cleveland.
ASHTABULA HARBOR, O.—C. Large.
CHICAGO, ILL.—Joseph Gray, 9 West Randolph Street.
CHICAGO, ILL.—H. B. Hansen, 33 West Randolph Street.
BUFFALO, N. Y.—Miss McCabe, Elk Street, near Ohio.
DETROIT, MICH.—Connors' Marine News Co.
MILWAUKEE, WIS.—T. S. GRAY, CO. 126 Wisconsin St.
SAULT STE MARIE—J. P. Haller.
ASHTABULA HARBOR—O. M Kahne
ERIE, PA.—Reed Caughen, 816 State St.
DULUTH, MINN.—C. F. Johnson, 323 West Superior Street.
MARQUETTE, MICH.—J. A. Vannier.
ESCANABA, MICH.—Wm. Godley.
ESCANABA, MICH.—George Preston.
SARNIA, ONT.—D. McMasters.
OWEN SOUND, ONT.—J. Sharpe, Jr.
KINGSTON, ONT.—F. Nisbet, corner Brock and Wellington Streets.

Subscribers and others are respectfully invited to use the columns of the MARINE RECORD for the discussion of pertinent topics.

Entered at the Post Office at Cleveland as second-class mail matter.

CLEVELAND, O., FEBRUARY 14.


## CLEVELAND VESSEL OWNERS' ASSN

ORGANIZED IN 1880.

[Membership, 1888.]

Eighty-three steamers, aggregating..... 93,186 tons
Eighty-eight sail and consort, aggregating 54,664 tons

Maintain shipping offices at Cleveland and Ashtabula Harbor. Regulates wages, protects crews, and takes cognizance of all matters in the interests of the members and of the lake commerce generally.

OFFICERS.

H. M. HANNA.....President
H. P. LILLIBRIDGE.....Vice President
B. L. PENNINGTON.....Secretary and Treasurer
H. D. GOULDER.....Counsel

MANAGERS OR ADVISORY BOARD.

H. M. Hanna, M. A. Bradley, P. G. Minch, H. P. Lillibridge, Geo. P. McKay, J. H. Palmer, Thos. Wilson, J. W. Moore, R. K. Winslow, W. D. Rees, James Corrigan, W. C. Richardson.

EXECUTIVE COMMITTEE.

H. M. Hanna, M. A. Bradley, Thos. Wilson, J. W. Moore, Geo. P. McKay.

SHIPPING MASTERS.

A. R. Rumsey, 93 dock, Cleveland; Fred Bennet, assistant, 98 dock, Cleveland; Wm. Reunick, Ashtabula Harbor.

MARINE RECORD—OFFICIAL PAPER.

## *MERCHANT MARINE.*

We have received, with the compliments of Joseph R. Oldham, civil engineer, a blue print diagram of American and British shipbuilding and transportation between the United States and Great Britain, and on referring to the curve of transportation we find that the British tonnage for the period ending last year, towers 7,000,000 tons above the American, and the British tonnage is still raising while ours is going down at a similar angle, which, if not assisted to rise or prevented from falling, will reach zero in 3½ years from now, and our 3 per cent of remaining trade with Britain will be gone by June, 1892. The difference in shipbuilding for the same period shows 4,500,000 tons in favor of the British, notwithstanding our lake tonnage built, which amounts to 70 per cent of the total last year, is included.

In the diagram referred to the columns on the left show that in 1853 our steam tonnage building was about twice the amount of the British, while theirs now building is five times as much as ours and their transportation looms still larger. Our shipbuilding for the foreign trade is about dead, and if nothing be done to revive it, our transportation will share the same grave, for it is shipbuilding that promotes shipowning all the world over.

The question of wages paid men serving in the merchant service is frequently put forward as one reason for the decline and stagnation of the American merchant marine. Another subject often discussed at great length is the dietary system, which is always spoken of as being much more liberal and consequently more expensive than the scale set forth and signed by the seamen of other nationalities. According to the above remarks the daily expenditure being greater, our vessels required a better rate of freight than those of foreigners, simply to meet the wages and ship chandlers' accounts, and it was thought advisable sometimes, in the past, even to send a ship to sea with fewer men, depending on quality to make up for numbers, so that the American ship could compete successfully in the freight markets of the world. However, we may venture to say that the average small increase in wages has little or nothing to do with the decline of American foreign shipping, and we draw this inference chiefly from the fact that the nation predominant in marine affairs to-day pays more wages than any of her competitors in the traffic of the seas. If the American seamen's wages exceed those of Great Britain, so also does the wages of the latter power exceed the average of all other nations, and as they have the ships to sail Danes, Americans, Germans, Swedes, and Norwegians, are found sailing them, and in point of fact a foreign crew is always given the preference in an English ship so that although the nation has attained the point of superiorty in her merchant marine it has not been arrived at by purely native talent and energy. The food served on the English vessels is also better and more plentiful than that supplied by any other nation, excepting our own, and with the same result, viz., progression a said above in all the maritime branches of commerce and colonization, hence it may be clearly shown that the small increase of expense as represented by the extra pay and diet is no factor in the prosperity or decline of a merchant marine; hence the apparently insurmountable obstacles which this country's mercantile service would have to face would dwindle into insignificance. Notwithstanding the croaking of the individuals who show at a glance that American shipping can not prosper when handicapped as it is both on wages and food bills.

If we had the ships Lascars might handle them, even if it took double the number, but without vessels for our foreign trade we are compelled to foster and encourage alien interests, knowing at the same time that the field is open for all and that this country is as bountifully supplied with the necessary material as any other. Quoting from a report of the commissioner of navigation this authority says that we have "foreign skill, experience, and a long established business to contend with," but we should make the attempt to compete with them or the next twenty-five years may see us without any ships except our fleet of lake craft and coasters.

The importance of a great commercial navy to a country that possesses it has recently been the subject of much investigation and study, and our ablest economists and statesmen on both sides of the question agree that a large and important merchant marine should be an established quantity in the elements of a flourishing nation, and having these facts acknowledged, congress still seems to hesitate in legislating for the encouragement of shipbuilding, being as it were humbugged by the inconsistent belief that we dare not compete because it apparently takes more money to sail an American vessel than any other.

When this country had a merchant fleet the build and discipline maintained were noted as the best on the seas, and the ambitious sons of our best citizens embraced the profession eagerly, and when they were put into competition with the rest of the world a spirit of emulation was aroused in them which aided in creating seamen unsurpassed by any nation. With the decline of our shipping the maritime spirit of the rising generations were checked, and now we are in an unenviable position, without ships or Americans to man them. As our commercial interests increase we will feel more keenly he effects of this deplorable condition, and although we do not wish to take a gloomy view of our future prospects, we cannot hide the facts that unless something is done at an early date the ever-growing trade of the world will pass entirely out of our hands, and the distinctively American merchant seamen will be a personality of the past.

From advices at hand we now see that England is going through a crisis in connection with her shipping on account of a general strike among the seamen and firemen for increased wages, opportunities of this sort even might be taken advantage of and a spur given to American tonnage in the freight markets which would materially assist in forming the nucleus of a merchant marine, manned by men who, from the pure motive of patriotism, would always uphold the honor and prestige of the stars and stripes on the seas, and in the various ports of the world to which they may be trading. The United States can not afford to be isolated from the commercial pursuits of the world, and our coast line admits the possibility of our becoming the first maritime power. Yet a mushroom growth or mammoth boom is not to be desired in the creation of a powerful merchant service, and any measures tending in this direction ought to be severely sat down upon for the simple reason that a reaction would probably ensue, working more harm to the interests at stake than the benefits of an artificial impetus given to the industry at large; and in this connection we wish to point out that the tonnage bounty, or navigation premium, which has been so frequently and clearly explained in the columns of this paper, must not be regarded in the light of a pension, enabling vessels to lay at anchor, or be tied up to a wharf at the expense of the nation, but on the contrary, the ships must be kept at actual service patroling the oceans with freight, commanded and officered by Americans, to become entitled to the benefits of a navigation premium for a limited number of years. Legislation favoring a system of this sort would permit the gradual introduction of native brain, sinew, and talent without involving the country in international treaty complications which might possibly arise under the system of discrimination followed out in the early days of the republic, when foreign bottoms participating in the transportation of our imports and exports had to pay a larger duty than was imposed on home tonnage, the object, however, is not to cripple ocean tonnage, but to revive, rebuild, and reman our merchant marine by equitable and far reaching legislation.

## TRAFFIC OF THE CLEVELAND DISTRICT.

It has been our fortune to receive from the deputy collector of customs, Mr. Owen Kane, the following statistics of entrances and clearances, which has been put in tabular form for reference As will be seen it shows the class of vessels entering and clearing, both coastwise and foreign, and is made valuable on account of its authority. It must be observed that we have this year, notwithstanding the lower rate of freight, made great advances in the volume of business, and believe next year that something better will come out of Nazareth. The outlook for the season of 1889 is much better than that just closed, and we trust that the readers of this article will be easily convinced of that fact. It may possibly be said that this is not a fact; nevertheless, we insist that it is; and we have too much conscience to to say one thing and mean another. It has also been held by many that too much tonnage is being put afloat. That is also a bug-bear, inasmuch as the growth of tonnage does not equal the demand for it. It is possible that in the towns, or ports where this tonnage is built, a feeling of security prevails, as a matter of course, but it is necessary to establish a feeling of security with outside people, we therefore say that it is utterly impossible for our shipbuilders to put afloat more capacity than can be used. Again, we thank Mr. Kane for his kindness in furnishing the following tables:

CLEVELAND.

| Vessels entered, coastwise:— | Number. | Tonnage. |
|---|---|---|
| Sail vessels | 1,233 | 490,744 |
| Steam vessels | 1,342 | 898,002 |
| Total | 2,575 | 1,388,746 |
| Vessels cleared, coastwise:— | | |
| Sail vessels | 1,148 | 506,426 |
| Steam vessels | 1,370 | 939,144 |
| Total | 2,518 | 1,445,570 |
| Ore received, tons | | 1,111,915 |
| Lumber received, feet | | 269,477,000 |
| Coal shipped, tons | | 720,723 |
| Oil shipped, worth | | $1,051,406 |

ASHTABULA.

| Vessels entered, coastwise:— | Number. | Tonnage. |
|---|---|---|
| Sail vessels | 281 | 199,448 |
| Steam vessels | 613 | 685,775 |
| Total | 894 | 885,223 |
| Vessels cleared, coastwise:— | | |
| Sail vessels | 309 | 215,713 |
| Steam vessels | 599 | 670,741 |
| Total | 908 | 886,454 |
| Ore received, tons | | 1,309,858 |
| Coal shipped, tons | | 499,062 |

FAIRPORT.

| Vessels cleared, coastwise:— | Number. | Tonnage. |
|---|---|---|
| Sail vessels | 189 | 122,860 |
| Steam vessels | 197 | 202,485 |
| Total | 386 | 325,345 |
| Vessels entered, coastwise:— | | |
| Sail vessels | 235 | 146,554 |
| Steam vessels | 234 | 241,113 |
| Total | 469 | 387,667 |
| Ore received, tons | | 614,067 |
| Coal shipped, tons | | 138,000 |

LORAIN.

| Vessels entered, coastwise:— | Number. | Tonnage. |
|---|---|---|
| Sail vessels | 183 | 79,335 |
| Steam vessels | 130 | 89,659 |
| Total | 313 | 168,994 |
| Vessels cleared, coastwise:— | | |
| Sail vessels | 202 | 84,340 |
| Steam vessels | 159 | 98,721 |
| Total | 361 | 183,061 |
| Ore received, tons | | 195,370 |
| Coal shipped | | 270,000 |

IN DISTRICT.

| Coastwise:— | Number. | Tonnage. |
|---|---|---|
| Total vessels cleared | 4,273 | 2,840,230 |
| Total vessels entered | 4,251 | 2,830,630 |
| Total ore received | | 3,231,310 |
| Total coal shipped | | 1,627,825 |
| Vessels that entered and cleared, foreign:— | Number. | Tonnage. |
| Vessels entered | 507 | 101,235 |
| Vessels cleared | 663 | 159,328 |
| Coal shipped, foreign | | 308,966 |
| Oil shipped, foreign, gallons | | 119,573 |

Captain Day, superintendent of the N. Y., P. & O. ore docks, has kindly furnished this office with the quantity of iron ore received each year by the company, at Cleveland, since 1869:

| | Tons. | | Tons. |
|---|---|---|---|
| 1869 | 193,640 | 1879 | 309,407 |
| 1870 | 235,139 | 1880 | 351,162 |
| 1871 | 180,512 | 1881 | 397,130 |
| 1872 | 226,322 | 1882 | 498,337 |
| 1873 | 243,226 | 1883 | 431,714 |
| 1874 | 174,787 | 1884 | 385,323 |
| 1875 | 148,391 | 1885 | 367,540 |
| 1876 | 162,871 | 1886 | 614,043 |
| 1877 | 226,461 | 1887 | 529,409 |
| 1878 | 238,004 | 1888 | 512,017 |
| | | Total | 6,415,435 |

These figures have been compiled from the books of Mr. J. N. Booth, agent of the N. Y., P. & O. Ry. Co.

There was on February 1, 221,000 tons of ore on the docks, and it is being taken away at the rate of 1,200 tons per day, though it is expected that a much larger quantity will be moved daily from now until the opening of navigation.

The shipments from Escanaba to Lake Erie ports for the past 11 years, are as follows:

| | Tons. | | Tons. |
|---|---|---|---|
| 1878 | 506,892 | 1884 | 1,356,588 |
| 1879 | 796,003 | 1885 | 1,219,777 |
| 1880 | 1,171,765 | 1886 | 1,538,821 |
| 1881 | 1,463,190 | 1887 | 2,072,867 |
| 1882 | 1,736,454 | 1888 | 2,203,199 |
| 1883 | 1,426,876 | Total | 15,492,432 |

The lowest freight paid during the season of 1888, from Ashland to Lake Erie ports, was $1.10, and highest $1.90. The general average paid was about $1.40 per ton (rather less than more). Shipments from Ashland docks for the past season amount to:

| | Tons. |
|---|---|
| Milwaukee, Lake Shore & Western Ry. Co... | 644,320 |
| Wisconsin Central R. R. docks | 372,091 |
| Total from Ashland harbor | 1,016,411 |

## *ARE COMPARISONS ODIOUS?*

Seacoas papers claim that the big schooner Governor Ames can carry more lumber than any vessel afloat, having a total capacity of 1,750,000 feet. She can carry a deck load of 500,000 feet. The barge Wahnapitae, owned by the Emery lumber company of East Saginaw, beats her, having carried over 2,000,000 feet of lumber in a single trip.—*Milwaukee Evening Wisconsin.*

There is an eternal fitness in matters maritime, as well as in other affairs, as all marine men will allow. We pointed out in a previous issue that the lake schooners, David Dows and the Golden Age compared favorably as regards size, build, carrying and sailing qualities, with the large salt water schooner, Governor Ames, which, by the way, was evidently sparred too heavily as she has thrown her first sticks out of her, and is now receiving shorter lower masts; yet if downright gall could make the comparison less odious, we would award the cake to the Milwaukee Evening Wisconsin, which claims that the square, scow built, double ended serving mallet, barge Wahnapitae, owned by the Emery lumber company of East Saginaw, beats the Governor Ames in carrying capacity. Where the similitude comes in when comparing a fine, well built, and fully equipped vessel that is well fitted, and able to take care of herself all alone at night time, with a bruise water who is just one remove from a raft, and unable to move anywhere, or place, unless she is pushed, palls our imagination, and in pitting vessels trading on our inland seas, against sea coast vessels, let us show like for like, instead of holding up a dug out in comparison with a fine, staunch, seaworthy craft as the Governor Ames certainly is.

## LAUNCH OF THE STEAMER NORTH SHORE.

The fine steel steamship North Shore was launched from the Globe Iron Works shipyard at 3 p. m. last Tuesday. Besides the officers of the company there were present, as usual, a large number of marine men, visitors and sightseers, who knowing the custom of the firm were punctually on time to witness the virgin plunge of another splendid specimen of our inland merchant fleet of steamers.

The christening ceremony af this midwinter launch was performed by Miss Carrie E. Ashburn, with her usual grace and composure, and the contents of a bottle of Pomerky Sec besprinkled the stem of the North Shore as her keel touched the water. Amid the blowing of whistles and the cheers of the crowd of sightseers, the vessel steadied and sat upright, the figures showing her draft to be 6 feet 8 inches aft and 4 feet forward, or a mean draft of 5 feet 4 inches.

The North Shore is numbered 22 by her builders, and is the sixth steel steamer built by the Globe Iron Works Co. for the Northern line, the pioneer of the fleet, named the Northern Light, having been launched April 17, 1888. James J. Hill, Minneapolis, Minn., the superintendent of the company, and his wife, attended the launch, this being the only vessel of the fleet which he has seen put afloat. He was greatly pleased at the punctual and workmanlike manner in which John Smith, the superintendent of construction at the shipyard, handled the large mass of steel.

The dimensions of hull and machinery are the same as the preceding five Northern line boats, and at the risk of a repetition we duplicate the figures: 312 feet over all, 292 feet keel, 40 feet beam, 24 feet 6 inches molded depth. Triple expansion engine, cylinders 24, 38 and 61 inches, with a 42 inch stroke now placed on board.

The boilers, which have been built by the Globe Iron Works Co., will be taken on board at once, and the vessel will be completely fitted out by the opening of navigation.

Among the gentlemen who attended the launch we noticed J. J. Hill, president St. Paul, Minneapolis & Manitoba railroad, who was the contractor with the shipbuilding company for the Northern fleet, Captain Murch, who was superintending the construction of the boats for the owners, Captain Henry, manager of the Lehigh Valley Transportation Co., Buffalo; Captain De Wolf, local inspector, Captain Frank and C. W. Brown, Captain Bradford, navigation instructor, Captain Williams, and many others.

The estimated cost of the steamer as per contract is $220,000, aggregating receipts of the Globe Iron Works Co. of $1,320,000 for the fleet of the Northern line.

M. Winter has rebuilt about 175 feet of his dock, east from Eighth street bridge, Amherstburg. Nic. Stone did the work.

At a meeting of the Quebec board of trade resolutions were adopted asking the federal government to take the necessary steps toward making the navigation of the gulf a practicability as early as the first of March; also, to have a permanent light placed at Traverse, and telegraphic communication extended as far as the straits of Belle Isle. In view of the steam scheme sealing business this winter, it was decided to petition the government to keep the signal service office here open all winter, so as to keep the public posted as to the movements in connection with winter navigation.

## LAUNCH OF STEAMSHIP THOMAS W. PALMER.

DETROIT, February 12.

*Special to the Marine Record.*

About one hundred invited guests boarded a special train on the Michigan Central railroad at Detroit last Saturday afternoon and proceeded on to Wyandotte to witness the launch of one of the largest steamers ever built on the Detroit river. The launch of the steamship took place with the usual promptness and success which always attend the launching of a vessel at the Wyandotte yards of the Detroit Drydock Co. It may not be generally known that the telephone plays an important part on these occasions. Yet such is the case, and Mr. Frank E. Kirby usually standing at the fore foot of the vessel, talks easily and quietly to Mr. Fitz A. Kirby, who has the control of the after end of the launch.

On Saturday afternoon, when the preliminary arrangements had been completed, the telephone was brought into use as usual, and amid a large and distinguished group of visitors and sightseers the Kirbys telephoned the Thomas W. Palmer gracefully off the ways into her natural element. The success of the launch and the fine, smooth appearance of her hull brought forth congratulations from all sides, while the profuse display of bunting over Messrs. Savage & Farnum's Grosse Isle stock farm, called for remarks, and an explanation by Mr. Savage, who claimed it was Percheron day, alluding to the compliment paid the noble animals of that class in the designation of the company, the Percheron Navigation Co., and as an expression of welfare in the career of the pioneer of the fleet the members of the American Percheron Horse Association present, the Thomas W. Palmer with a beautiful set of colors.

The new steamship is of composite construction. Her frames are of steel. Her bottom and about twelve feet on each side are of six inch oak plank, and above that the sides and bulwarks are of steel. The steel plating at her sides is connected to a steel bilge strake by diagonal strapping, which adds greatly to the strength of the ship. The steel bilge strake is under the planking of the bilge. Her decks are also diagonally strapped with iron. She has a collision bulkhead forward, and one aft, and is divided into three freight holds by iron bulkheads. There is a water ballast tank aft under the main deck for trimming purposes. She has three masts and one smokestack, and in general appearance resembles the E. M. Peck. Her accommodations for officers and crew are unusually well fitted up. Here dimensions are: Length of keel 283 feet, length over all 299 feet, beam 42 feet, depth 22 feet 6 inches. She has two Scotch boilers 12 feet diameter 11 feet long, built by the Lake Erie Works, Buffalo, and weigh over 25 tons each, which are allowed a working pressure of 160 pounds. The engine is a triple expansion, built by the Frontier Iron Works, Detroit. The cylinders are 20, 32, 54 inches. Her propeller is 12 feet 8 inches in diameter. The Providence steam windlass, from the American Ship Windlass Co., Providence, R. I., steam steering gear, and all modern improvements have been provided in her equipment. The capacity of the new steamship will be 2,500 tons on a draft of 16 feet, and the cost $180,000. In about two months an exact duplicate will be launched at the same yard for the same company. Both of these steamships will be used as general freighters in the grain, coal, and iron ore business.

Senator Thomas W. Palmer, whom the steamer is named after, is president of the Percheron Steam Navigation Co., and William Livingstone, Jr., is manager.

There were quite a large number of professors and students from the Michigan University present at the launch, and they were among the most enthusiastic spectators, so that if scholastic talent and collegiate honors count for anything in the christening ceremony, the Thomas W. Palmer will be blest in her career.

We notice, however, that one by one the old seamen's superstitions are being exploded and the names of the Percheron fleet will tend to destroy the old salt's prophecy that, to talk of horses when afloat brings along a gale of wind; on the other hand the old salt might be molified a trifle if he considered that the horse latitude would surely treat the vessel kindly that belongs to and sails under the flag representing the noblest specie of the quadrupeds from which the locality takes its name. Yet, whether the Thomas W. Palmer is ever destined to race along through the horse latitude or not, she is gladly welcomed as a valuable acquisition to the fine class of steamers now being put afloat on the chain of lakes, and managed by gentlemen who have perfect knowledge of her capabilities.

If she had to, Germany could worry our seaboard with thirteen armored ships, the biggest being the Kœnig Wilhelm, of 9,750 tons, having twelve inches of armor at its thickest, and carrying in her main battery eighteen fourteen-ton guns. To chase our commercial flag on the high seas she has four fast unarmored cruisers. In the balance of her navy are at least fifteen good ships, of between 2,850 and 2,000 tons, which would be troublesome until we were ready to take 'em in tow. The guns of all her ships are breech-loading Krupp.

## LAKE CARRIERS' ASSOCIATION

TO CONSIDER AND TAKE ACTION UPON ALL GENERAL QUESTIONS RELATING TO THE NAVIGATION AND CARRYING BUSINESS OF THE GREAT LAKES AND THE WATERS TRIBUTARY THERETO, WITH THE INTENT TO IMPROVE THE CHARACTER OF THE SERVICE RENDERED TO THE PUBLIC TO PROTECT THE COMMON INTEREST OF LAKE CARRIERS AND PROMOTE THEIR GENERAL WELFARE.

BOARD OF MANAGERS, 1888.

THOMAS MARTIN..... Oswego, N. Y.
JAMES ASH..... Buffalo, N. Y.
W. BULLARD..... Buffalo, N. Y.
S. D. CALLWELL, President..... Buffalo, N. Y.
E. T. EVANS..... Buffalo, N. Y.
W. P. HENRY..... Buffalo, N. Y.
P. P. MILLER..... Buffalo, N. Y.
FRANK J. FIRTH, Vice President..... Erie, Pa.
M. A. BRADLEY..... Cleveland, O.
H. M. HANNA..... Cleveland, O.
THOMAS WILSON, Vice President..... Cleveland, O.
A. W. COLTON..... Toledo, O.
P. P. MILLER, Vice President..... Buffalo, N. Y.
EBEN WARD..... Detroit, Mich.
JAMES DAVIDSON..... Bay City, Mich.
JOS. AUSTRIAN..... Chicago, Ill.
W. M. EGAN..... Chicago, Ill.
IRA H. OWEN, Vice President..... Chicago, Ill.
R. P. FITZGERALD..... Milwaukee, Wis.
DAVID VANCE..... Milwaukee, Wis.
ALEX MCDOUGALL..... Duluth, Minn.
FREDERICK ALMY, Secretary..... Buffalo, N. Y.
JAS. CAREY EVANS, Treasurer..... Buffalo, N. Y.

MARINE RECORD—OFFICAL PAPER.

### LOST TONNAGE.

If vessel owners could have desired the season of 1888 to have closed in a somewhat more remunerative manner, the insurance companies, on their part, have little to complain of. One of the reasons that will make the year 1888 memorable in the history of lake navigation is the light loss of life and property from shipwreck. Old mariners fail to recall the time when the season as a whole has been so free from disastrous storms. November, the month dreaded most by the mariners, passed without a blow worthy of being called a gale. The total list of lost boats foots up 48, with a carrying capacity of 177,000 tons and a total valuation of $439,400, but these figures barely represent half the losses of 1887, when 70 boats, capable of carrying 34,000 tons and valued at $777,700, went out of existence. A year ago 116 souls went to the bottom in a series of ruinous storms that swept over the entire chain of lakes, while in 1888 only 16 lives were lost from actual shipwreck. If the loss of life from other causes involved in the dangers of navigation were added to these the number would be somewhat increased, but would certainly fall far short of other years. The same can be said of the loss of property. If the results of boats going ashore and aground in shallow channels were added, the aggregate would probably be three times as large as that presented by the total losses. The losses have been largely curtailed by the class of boats that have met with fatal accidents, being small and of a low grade. The number of boats destroyed by fire is also larger than usual for a single year, being ten in all, with a valuation of $124,200. The above figures refer only to boats that were total losses, and to both American and Canadian bottoms. Of Canadian boats just nine have left the lake trade never to return.

### SIGNAL SERVICE MERIT.

"The practical value of the signal service has grown upon the public," observed Signal Officer Evans to the Journal. "Vesselmen were slow to recognize its value, and old sailors who had spent all their lives upon the lakes hesitated to believe that the man who sat in the signal offices could tell them more than they had learned by experience as to when storms were coming, and they couldn't understand how we could tell the direction from which they would arrive and the degree of severity to be expected.

"I recall an incident in point while I was at Port Huron in '79. The case was that of an old captain, who got to coming to the office through curiosity. He had a vessel with a cargo, and a couple of barges in tow, all ready to put out, one day when he called. He was going to Sand Beach, which I think is a run of about 60 miles. The storm signal was up, and we told him we didn't think he could reach the breakwater before the storm, but he declined to be governed by the indications and went ahead. He had gone but about half the distance when the storm came and he had to turn tail and come back. The line on one of the barges parted and he had to cast the other off. The vessel was grounded at Port Huron and badly damaged, in addition to the loss of the cargo. The captain was a part owner of the vessel and his losses were a serious blow. He felt very badly, and he was never afterwards without confidence in the signal service signals.

Since the time of which I speak there has been a radical change and the signals are closely watched by the sailors, who are disposed to heed them. We have two signals, one which indicates the coming of a gale with wind at a velocity of 25 miles an hour, and another that denotes a velocity, of 35 an hour, promised by the indications. Of course there are some vessels which are staunchly built, that might safely go out in a "blow" of 25 miles an hour, and of course they do not stop, when nothing stronger is indicated; but when a velocity of 35 miles an hour is promised none of them care to venture out. We miss it once in a while, but not so often but that it is safer to be governed by the signals."

"What did Noah live on when the flood had subsided and his provisions in the ark were exhausted?" asked an Ogdensburg Sunday school teacher of her class last Sunday. "I know" squeaked a little girl, after all the others had given up. "Well, what?" inquired the teacher. "Dry land," said the kid wisely, and the answer passed.—*Ogdensburg News.*

## AROUND THE LAKES.

[CONTINUED FROM FIRST PAGE].

PORT HURON, MICH.

Special to the Marine Record.

The boys are all happy. Most of them have received their appointments as masters:

F. W. Wheeler, John Ivers master; Necosta, William Hutchinson; E. E. Tyson, Geo. McElroy; W. W. Stewart, L. Sinclair; Cleveland, Dan Sinclair; W. R Stafford, Dave Hutchinson; Arizona, Hugh Stevenson; A. J. Wright, H J. Kendall; John T. Mott, Thos. Currie; Alcona, Frank Danger; Dean Richmond, Charles Hughes; S. E. Peck, Lew Young; C. F. Curtiss, Robert Gaines; Alex. Folsom, A. Gaines; Tom Adams, A. A. Cox; Mary Pringle, John Littel; Sonora, James Van Slack; Hiawatha, John McArthur; Samson, Robert Connolly; Castel, Ed Allen; J. H. Magruder, A.Conkey; John Owen, A Rattray; Porter, Chris Smith; L. L. Lamb, John Buzzard; General Burnside, Nelson Littel; Magnet, William Nasway; Galatea, Fred Manuel; H. Ross, William Bonnah; Mary Hattie, Geo. McKay; Vanderbilt, John Hayes; William J. Averill, William Rollo; Bell Hanscomb, George McLeod; Ida Torrant, M. J. Madden; Mocking Bird, John Stevenson; William Brake, A. Meswold; Sea Gull, James Stevenson; American Giant, George Bonnah; Mike Grah, Hank Hughes; Mary Grah; Cal Jones; L. H. Drake, Vick Bonnah; Mystic, John Cornnell; Osceola, H. Zealand; Mineral State, Frank Downer; S. J. Tilden, William Davis; Manistique, Walter Ashley; City of Concord, Frank Hebron; A. P. Grover, Robert Shingler; Aunt Ruth, William Castor; A. C. Maxwell, Fred Geno; Kittie Haight, William Curtiss; R. Martine, C. Evans; Conger, George Talbot; steamer Hiawatha, Ed Thomas; Dormer, George Carter; Gogebic, William Neil; Minnie Davis, H. N. Jex; A. Ford, O. Hill; Kitty Smoke, H. Davis; Ogemaw, Thomas Cowen; Mary, Sam Benham; Hercules, Robert Goodwin.

The river steamer Mary has laid up at this port for the winter.

Otis Joslyn and Mrs, Thomas Currie, of this city, have sold the steambarge Edwin S. Pease, formerly the Canadian propeller California, to Mrs. Lavinia E. Pease, of East Saginaw, for $6,000.

Captain Lew Cox will leave for Chicago this week to look after the loading of the Farwell and Rutter.

Captain Slyfield, of this city, has sold his interest in the steambarge Oswegatchie to St. Clair parties.

Henry McMonan, of this city, has purchased the new steambarge Pawnee of the T. S. T. Co.; also the barges Edwards, Orton and Young from the same company. This will make a first class tow. The price paid for the four boats is $103,000.

Captain William Bonnah is rebuilding his schooner the H. Ross, at Hayne's yard.

The ice tug Merrick is fitted out and is ready to break the ice that may block the river at any minute. Captain Smith says that the Merrick is a bull in the ice.

Captain McKay is giving his schooner, the Mary Hattie, a good rebuild at Hayne's yard.

John Drawe has sold his interest in the schooner Thomas Gawn to Marine City parties.

Mr. Bostford, the steamboat owner, will return from California the first of next month.

Edward J. Lynn, of the V. O. T. tug line, has returned to Chicago after a two weeks' visit with his parents.

The propeller Colorado, of the Sarnia & Duluth line, lying at the C. & C. T. R. R. dock, was discovered to be on fire at 8:30 Monday night. The upper works forward was very badly burned, and the damage will amount to about $4,000, and is fully insured.

No appointments have been made for the tugs Spencer and Hand, of Lynn's line.

Thomas Fish, of this city, has purchased the barge Lone Star for $3,500. LYNN.

MILWAUKEE, WIS,

*Special to the Marine Record.*

The Torrent was built by the Detroit Dry Dock Co., in 1881 and was used as a tow barge in the lumber trade, not receiving machinery till a year later. She tons 277, and rates A1*, fair condition, considering the usage she has had.

Captain D. Sullivan will not plough the the lakes during the coming season, having accepted the position of appraiser with D. Vance & Co., of this place. His many friends wish him success in the new vocation, knowing he will winit pluck, energy, and a genial disposition count for anything.

Captain Clark, formerly of the steamer Omaha will command the steamer Veronica vice Captain D. Sullivan retired.

Captain Charles Moody, for many years connected with the Milwaukee tug boat line will command the F. & P. M. No 2. Captain Russel going to the No. 4, and Captain Duddleson leaving the line to command his own steamer now under construction.

The Wolf & Davidson steamship company have made the following appointments: Steamer Davidson, Captain Craine; engineer, Thomas Albrighton, steamer Wolf, Captain, Ed Thorpe; engineer, M. Tonar; steamer G. H. Dyer, Captain, W. Craine, engineer, E. Basset.

Some time ago the board of public works decided to make borings and tests on the lake, preparatory for the construction of a new water works, north of the present one. The contractors for borings were Gray Bro's and they constructed a temporary pier in the lake on which to place the machinery. During the storm a week ago, the work was demolished along with all machinery and Capnain L. Vances' fine fur overcoat and rubber boots.

Messrs. C. H. Starke and Co., will probable take a tug to Sandusky with their dredges to do the necessary towing.

Sheriffs report a new wheel for tug Chamberlain, Lorain, one for tug Muskegon at Menominee, one to Goodrich transportation company's new boat at Manitowoc, one to tug Cyclope, New York city and several others, with prospects good for next season. There is very little news of interest transpiring. J.

RACINE, WIS.

Captain Jack Weatherall has returned from his successful trip on the yacht Pilot, which carried himself and two friends a voyage of 3,000 miles without an accident. He reports the weather of the south as less pleasant than in Racine this winter The boat was sold at Port Eads, or what is called the southeast pass, which is the main entrance for ocean boats for New Orleans.

KINGSTON, ONT.

Captain Thomas Donnelly has been appointed government inspector of hulls. It is not necessary to state that he is the right man in the right place, and that he will do his duty impartially and efficiently. He has had great experience as a navigator and wrecker, and the government in appointing him has selected a man who will carry out the provisions of the act in question to the letter.

AT LORAIN, OHIO.

Erwin & Fenner, managers of the Fairport ore docks, are building a tug here She is to be 90 feet over all, 86 feet keel, cylinders 24x 26, boilers 7½ feet shell, built by Connelly Bros. Her machinery will be supplied by Manning. She is to assist in taking care of the barge tonnage now frequenting Fairport.

### PROTECTING ASSOCIATIONS.

The report of the directors of the North of England Protecting and Indemnity Association shows some of the dangers of the seas that are not much thought of by landsmen. In that association a large part of the steamers owned at the northern ports are entered, and its duty is by the power of the associated capital to protect the individual shipowner from claims that are made in excess of what may be considered fair; against claims under alleged port customs; and against absurd conditions of charter parties. The organization helps the shipowner to protect himself, and indemnifies him against losses which are the result of accidents that foresight cannot prevent. To the members the directors submit an annual report, and it enables the shareholders and owners "now on land" to appreciate the work of one of the associated cherubs that sit up aloft and look after the property that carries poor Jack. It has sent, with other societies, deputations to Rouen and Havre and to Genoa, and the improvement that has taken place at these ports is shown. It has had before it the losses in the American cotton trade; the risks entailed by the shipmaster signing bills of lading before the shipment of the goods; the losses which followed unscrupulous combinations in the fruit trade; the limit in collision clauses; the claims for damages on cargo inflicted by weather, and many such subjects. Steamship is to some extent at the mercy, where peculiar customs and charges prevail of brokers and charterers who work more for their own hand, like Hal o' the Wynd, than for the owners they ought to serve; and of shippers whose interests are often different to those of the steamship. Legal proceedings are needful to resist extortionate claims, which the single shipowner would probably not take; and it is here that the protecting and indemnity associations step in with the funds of many whose vessels may soon be in like needs, and with the accumulated experience of years. Slowly there will arise an international code of shipping law which will give general protection to the shipowner, though it may need special application in many cases, but until that is involved the need for the protecting association to shield the shipowner under the club will be great.

### THOUGHT HE WAS ADVERTISING.

"I remember," he continued, "when I was sailing on Lake Ontario, years ago, our vessel had an apparatus for lowering boats that was invented by a Buffalo man—he was a shoemaker, but I forget his name now, though I have often seen him in Buffalo since then. The boat was lowered by a windlass, and there was an automatic device for releasing it the moment it touched water. One day there was a yell of 'Man overboard!' I was at the engine and promptly reversed. A couple of buoys were flung after the man. In just three minutes the man was picked up, in twelve minutes the crew of the boat were back on deck and the vessel was on its way again. Quickest work I ever saw or heard of. But our captain was in a rage. He kicked the man out of the firehole, where he was getting dried. Thought he dropped over to advertise the shoemaker's device, I suppose. But it never came into general use that I've heard. Perhaps because it costs something."—*Buffalo News.*

The iron mines along Lake Superior last year shipped 5,023,279 tons of ore, the largest amount ever known.

### RETROSPECT.

The large amount of money invested during late years by Canadians in water property has made the inland marine one of the most important of our commercial interests. That the Canadian Government has long since recognized this fact is seen by its endeavors to further and promote this branch of trade by every means in its power. Year after year sees the marine business increasing and becoming more important, and each season sees more money put into vessel property. It is, however, a branch of commerce that has changed very much in recent years. Formerly the trade was in the hands of a few, the financial interest was not very great, and all the carrying was done by sail. Those were the days of big freight and large profits to the limited number who were engaged in business. Now all this is changed. Sail has given way to steam, and the small craft that formerly did all the carryng trade have been superseded by great iron steamers and propellers that can hold several times as much as the old vessels, and have the additional advantage of being able to make many more trips in a season than the slow-sailing schooners could average. With the advantages the more modern boats possess they can also take their cargo at a much cheaper rate, and make money out of it. The cost of transportation has, therefore, decreased greatly during later years, which is, of course, a distinct advantage to the shipper. The days of such large profits have also passed away, for although a much greater amount of money is spent on and made in the trade, it is divided amoung so many more who have invested in vessel property that, doubtless, smaller returns are yielded for the capital laid out. The fact, however, of so many being interested in marine commerce and of the additions continually being made to our inland fleet, is proof sufficient that there is still money to be made in the trade, and if the large profits formerly common cannot now be realized, at least there is sufficient interest to be earned on the capital to tempt those who are now engaged in the business.

### EUCALYPTUS.

NAVY DEPARTMENT,
BUREAU OF STEAM ENGINEERING,
WASHINGTON, July 21st, 1888.

*To Delafield, Morgan, Kissel & Co.. 71 Hudson Street, New York.*

SIR: Referring to yours of July 20th, I forward herewith copy of report made by a board of engineer officers on the U. S. steamer "Richmond" on your Downie's Eucalyptus Boiler Scale Preventive, July 12, 1888. Respectfully,

GEORGE W. MELVILLE,
Engineer in Chief, U. S. N.

U. S. S. "RICHMOND", Navy Yard,
New York, July 12th, 1888.

Sir: In obedience to your order of the 5th inst, appointing the undersigned a "board to report upon the advantage, if any, of the use of 'Downie's Eucalyptus Boiler Scale Preventive,' now in use in the boilers of the 'Richmond,'" we have the honor to report as follows:

We consider the use of Downie's Eucalyptus Boiler Scale Preventive of great advantage in lessening the deposit of scale, and in rendering what is deposited soft and easily removable, preventing, as it does, the scale from adhering to the surface.

It has been used in the steaming boilers of the "Richmond" since March, 1887, and at this time the interior surfaces are free from scale. It has never been found necessary to use scaling tools to scale these boilers, but to simply wash them out with a strong jet of water from the steam hose.

In the distilling boilers it has been used only about five months. In these boilers the deposit of scale was lessened, and what did form was soft, flaked off in many places, and was easily removed with scaling tools, leaving the surface very clean. The interior surfaces of the boilers show no sign of pitting or corrosion. There is no zinc suspended in the boilers.

In our experience the amount necessary to be used to obtain good results has been about eighteen gallons for thirty steaming days, the engines developing about 400 I. H. P. This quantity is not all put into the boilers at once; more being used at first than later. A good proportion in which to divide the eighteen gallons we have found to be about eight gallons the first week, four gallons the second, three gallons the third, and three gallons the fourth.

The preparation has not been used in the distilling boilers long enough on board this ship for the board to give a decided opinion concerning the quantity necessary to give the best results; but we should say that for a period of thirty days it would be about three times the amount used in the steaming boilers for a like period for equal amounts of water evaporated. The cost of the preparation is fifty-four cents per gallon. Respectfully submitted,

HENRY B. NONES, Chief Engineer, U. S. N.
E. A. MAGEE, P. A. Engineer, U. S. N.
JNO. W. ANNAN, A. Engineer, U. S. N.

To Rear Admiral Bancroft Gherardi,
Commandant, Navy Yard, New York.

All old subscribers are kindly invited to remit arrearages, and readers not subscribers will be made welcome to our list.

### WHY DOES POINT EDWARD FADE.

The Point Edward Post has a lengthy article on the decrease in the commerce at that port, owing to the restrictions placed on trade by the United States government. Only a few years since several lines of American steamers used to carry cargoes of grain, etc., to the Point to be shipped in bond over the Grand Trunk through Canada. Now these vessels are seen no more, and even the Sarnia line has to unload at the sheds and elevators on the opposite shore. The consequent loss to the village has been very great. The Post would like to know why this state of things exists and what brought it about. The answer is not hard to find.

Restrictions on trade between the two countries are at the bottom of the trouble, and the condition of things arising out of these restrictions have been brought to their present deplorable state by the idiotic policy of entering on a war of tariff retaliation such as has been adopted by the Dominion government and returned with compound interest by our neighbors. If instead of foolishly trying to see which country can do the other the most serious injury in matters of trade, both should bend their efforts toward coming to a friendly and neighborly agreement to trade freely with each other, pleasant relations between each other would not only be promoted but the new policy would add largely to the prosperity of both countries. The existing state of things is calculated to provoke ill will and cost both countries immense sums of money; whole armies of men and women being employed to prevent their citizens from violating customs laws which are obnoxious to their ideas of free citizenship, as well as to collect the tax imposed by these laws. Remove the trade barriers and the border towns in common with the whole country, will feel the benefits of free intercourse. and Point Edward would flourish with the rest.

### OBITUARY.

CAPTAIN JOHN CALTANACH died on the 21st of November, 1888. He sailed on the Lakes a number of years, and last master of the steamer Ruby.

Captain John Cattanach was a man of excellent qualities, greatly respected by all who knew him, and his death is much regretted by a large circle of friends and acquaintances. Possessed of an intelligent mind, a benevolent disposition, pleasant manners, and sterling honesty, he was a thoroughly good man, whose life was useful and blameless, and whose name and memory will long be cherished by all who knew him best. In relation of son, husband, friend, neighbor, and citizen, he discharged all his duties with remarkable fidelity, and I think it may truly be said of him that the only grief he caused was when he died. Death is the common lot and from it there can be no exemption, but it seldom happens to any one who exhibited in his life more genuine or manly virtues than marked the career of John Cattanach.

Here in this lonely, humble bed,
Where myrtle and wild roses grow,
A son of Neptune rests his head
For, reader, 'tis his watch below.

Long hath he done his duty well
And weathered many a stormy blast,
But now where gentler breezes swell
He's safely moored at last.

Tread lightly, sailor, o'er his grave,
His virtues claim a kindred tear:
And yet why mourn a brother brave,
Who rests from all his labors here.

Though here below his body lies
To mingle with the dust,
His soul has flown to brighter skies
To dwell among the just.

An emigrant ship was on its way to Sydney when a gentleman dropped a much-prized snuff box into the sea. About three days afterward the sailors captured and killed one of several shraks which were playing round the vessel. The lost snuff box was discovered in the stomach of the fish. An English cruiser had once seized what they believed to be a slaver, but were obliged reluctlantly to let her go for want of papers to prove the fact. A fortnight later a shark was caught, and in its body was found a roll of papers which condemned the slaver; they had been thrown overboard. The cruiser hastened in pursuit of the slaver and seized her just three weeks after the papers had been thrown into the sea.

It is stated that the contract for the construction of the new C. P. R. car ferry between Windsor and Detroit in connection with the railway's extension westward from London, has been awarded to the Polson Iron Works Co., of Toronto. The new boat, which will be the biggest on inland waters, will will be constructed at the company's shipyards at Owen Sound.


### CATARRH CURED.

A clergyman, after years of suffering from that loathsome disease, Catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death. And sufferer from this dreadful disease sending a self addressed stamped envelope to drofessre S. A. Lawrence, 212 East 9th st., New York will receive the receipt free of charge.

### A BIG WAVE.

An Oswego dispatch says that while a gang of men engaged in making repairs to the outer breakwater there, which was damaged by the great gale of last week, were about to stop work Thursday night, a tremendous wave arose 20 feet over the top of the pier, which was 13 feet above the water level, and swept nine of the men off the pier. Two tons of stone that had been dumped on the pier for crib work were washed off with the men. The last man rescued was going to the bottom and was two feet below the surface when a life preserver fell directly over him. All the men were nearly exhausted when taking out of the icy water. One had his teeth knocked out by the stones being hurled against him.

News from New Zealand represents that the Germans are taking a highhanded course in Samoa. But New Zealand is a thousand miles or so away from the scene of action, and it is just possible that the art of blowing news bubbles is not altogether unknown to the New Zealanders, who, by the way, are all Englishmen nowadays. If we wait for official advices we shall get much nearer the truth than it is possible to get now. Meantime the Senate has voted to appropriate $600,000 for the president to use in and concerning Samoa, Prince Bismarck's request for a conference is momentarily due in the State Department mail, the new dynamite-gun cruiser is in good working order, and a citizen of Pittsburg has invented a gunpowder which is eight times as strong as that now in use. On the whole, who's afraid?

In Duluth elevators there are in store today 744,973 bushels wheat, an increase for the week of 71,061 bushels. Of this total 420,435 bushels are 1 hard. A year ago the total in store was 5,389,750 bushels and the week's increase was 1,065,880 bushels. We where getting some wheat then. There is today 4,573 bushels corn and 19,640 bushels oats in store.

The Hon. George A. Kirkpatrick, M. P., of Kingston, said that he would introduce at this session the measure which was defeated last year in favor of reciprocity in wrecking between Canada and the United States. The prospect for carrying the measure is excellent.

The schooner Annie M. Foster, bound from Oswego to Kington, with coal, went ashore a mile below Sacketts Harbor last Thursday morning in a snow storm. The crew were gotten off and it is thought the vessel can be released.


**DIXON'S**

GRAPHITE

PIPE JOINT GREASE

FOR STEAM OR GAS PIPES

makes a perfect joint that can be opened with ease in three years or thirty years. Bolts, screws, etc., smeared with this grease will not rust even in the dampest places. Write to Jos. Dixon Crucible Co Jersey City, N. J., for circulars.

HARBOR TUG FOR SALE.

THE TUG MYRTLE, of Sandusky, Ohio, for sale cheap. Is in first-class condition. For particulars write to FRED GROCH, Sandusky, O.

FOR SALE.

WANT AN OFFER for a marine boiler, in good condition, ready to use; dimensions, 8½ feet diameter and 18 feet long.
CAPT. V. E. MEYERS, Manitowoc, Wis.

WANTED.

TUG.—A good towing tug, about 18x20 engine. Inquire of CAPT. E. S. SMITH.
No. 30 Twelfth avenue, East Duluth. Minn.

FOR SALE.

BARGE B. M. BAKER for sale cheap for cash, or will exchange for real estate. This is a bargain.
J. W. WESTCOTT, Detroit. Mich.

WANTED.

A GOOD MARINE ENGINE, 20x22, with or without boiler, etc, Address box 1, branch office Maine Record, 252 South Water st, Chicago, Ill.

FOR SALE.

HARBOR TUG for sale, cheap. This tug is in good repair and will be sold cheap, for cash, that is, $4,600. Engine 18x20, boiler 5 feet 6 inches by 11 feet, and allowed 100 pounds of steam. For further particulars inquire at 113 Franklyn avenue, Cleveland, O. CAPT. E. DAHLKE.

FOR

EUROPE!

By all first-class Steamship Lines at lowest rates. Call on or address,

**A. J. JACKSON.**

100 Public Square, CLEVELAND, OHIO.

Travelers' Information Bureau.

Ocean, Lake and Railroad

TICKET AGENTS

*224 Bank St.,*

*CLEVELAND, O*

# MONTAGUE IRON WORKS,

**Montague, Mich.,**

MANUFACTURERS OF

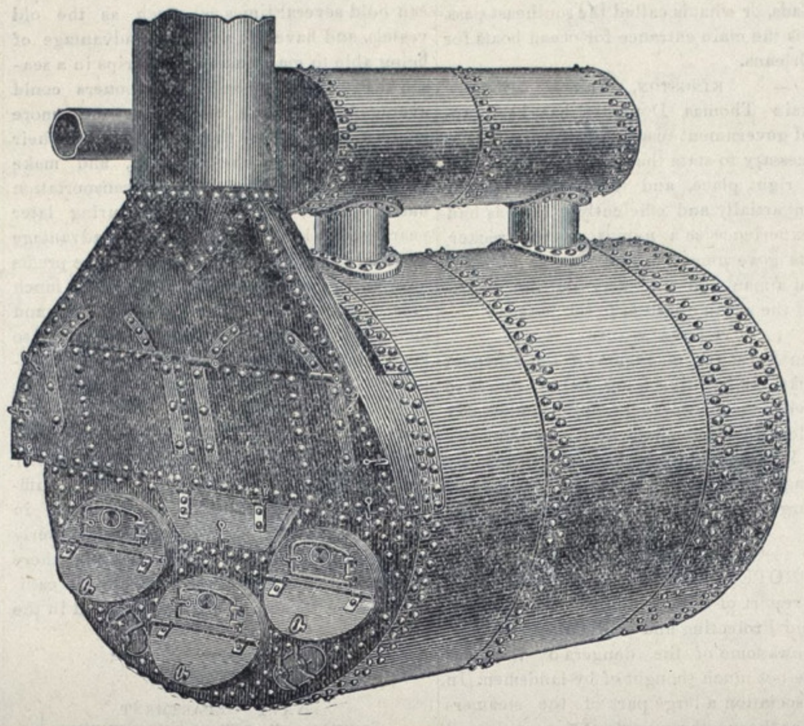
MARINE AND STATIONARY ENGINES

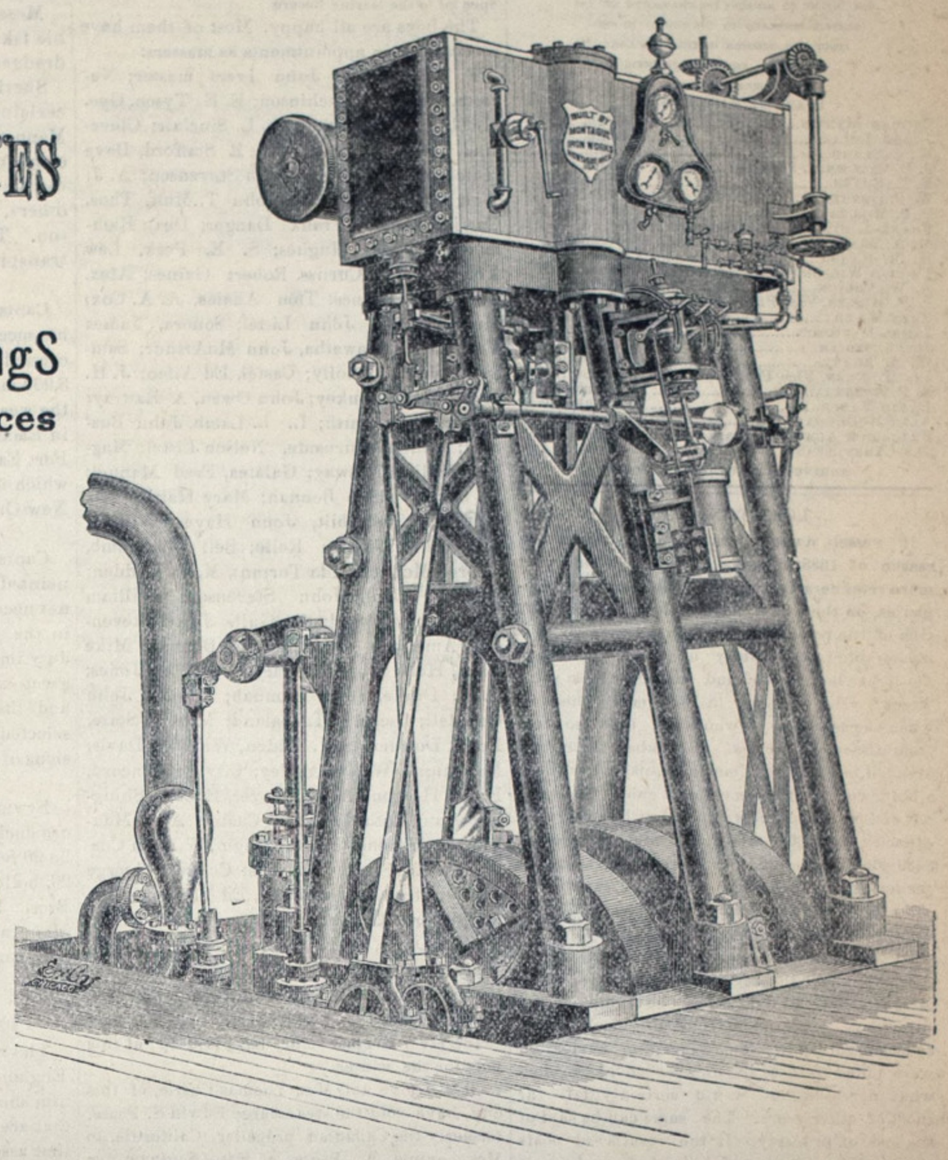
**AND BOILERS,**

Of Every Style and Size,

PROPELLER WHEELS and Heavy Castings

**A Specialty. Send for Circular and Prices**





FOR SALE.

PASSENGER PROPELLER GOLDEN EAGLE, Thoroughly over hauled this spring, "Sutton" Engine 14×14, 100 pounds steam, runs 14 miles an hour easily, and carrys 00 people. Owner has no reute for her and will sell for what she is worth.
JAMES E. ENGLISH
East Saginaw. Mich.

A. S. DeVries,

SHIP AND ORNAMENTAL PAINTER,

22 South Water street, Cleveland, O.

**Established in 1871. Telephone 210.**

Signs. Steering Balls, Liberty Caps, Ornamental Work a Specialty in Cabins.

J. R. OLDHAM, C. E.,

**Naval Architect,**

**Marine Inspector.**

SPECIAL EXPERIENCE IN DESIGNING, PRICES SELF-TRIMMING HATCHES COAL SHUTES AND BLAKE'S PATENT BOILERS.

**32 Exchange Bld.,**

*BUFFALO, N. Y*

HENRY ESCH,

**Groceries and Provisions,**

**Fresh and Salt Meats,**

DRY GOODS AND CLOTHING.

Special attention given to vessel supplies.

*Corner of Jay and 9th st. Manitowoc Wis.*


## ERIE RAILWAY.

The favorite and picturesque route to New York, Boston, and the East. The shortest and quickest route to Pittsburg, Washington and Baltimore, and the southeast.

New Central Depot South Water st. and Viaduct.

Change of time goes into effect Dec 23, 1888.

Central or ninetieth meridian time, 33 minutes slower than Cleveland city time.

Until further notice trains will leave from the new Central Depot, South Water street and Viaduct, as follows:

DEPART.

| | |
|---|---|
| No. 62, Mahoning Valley Accom | † 6 00 a m |
| No. 72, New York Express | * 8 30 a m |
| No. 72, Fast Pittsburg Express | * 8 30 a m |
| No. 64, Pittsburg Express | * 3 00 p m |
| No. 66, Leavittsburg Accom | * 4 20 p m |
| No. 68, New York Express | †10 50 p m |
| No. 68, Pittsburg Express | †10 50 p m |
| No. 70, Pittsburg Local Express | †11 45 a m |
| No. 74, Shenango Valley Express | † 4 20 p m |

ARRIVE.

| | |
|---|---|
| No. 65, Fast New York Express | *12 50 p m |
| No. 61, Pittsburg Express | † 7 35 p m |
| No. 67, Pittsburg Express | *10 55 a m |
| No. 65, Pittsburg Express | †12 50 p m |
| No. 63, New York Express | * 6 55 p m |
| No. 63, Pittsburg Express | * 6 55 p m |
| No. 69, Pittsburg Local Express | † 8 10 p m |
| No. 13, Youngstown Local | † 5 25 a m |

*Daily. †Daily except Sunday.

☞This is the only route by which passengers can reach Cory, Elmira, Binghampton, New York City, and intermediate points without change. No change to Boston and New England cities.

Baggage checked through to all points East.

Through tickets and information regarding the route can be obtained at office, 141 Superior street, and at depot N. Y., P. & O. railroad, South Water street and Viaduct, Cleveland.

A. M. TUCKER, Gen. Supt., Cleveland.
L. P. FARMER, Gen. Pass. Agent, New York.
W. C. RINEARSON, A. G. P. A., Cleveland.
M. L. FOUTS, Passenger Ticket Agent, 141 Superior street, Weddell House, Cleveland.


FOR SALE.

STEAM BARGE PASSAIC, and four consorts. Capacity, 3,300 tons coal or 2,400,000 feet timber. Boat now laid up at Buffalo. For terms and price, inquire of J. M. JONES, 52 Griswold St., or C. C. BLODGETT, 242 Woodbridge St., Detroit, Michigan.

FOR SALE.

MARINE ENGINE nearly new, includes bilge pump, hand pump and force pump, cylinder 17 by 20. Will sell cheap. Address.
K. BOX, Record Office.

FOR SALE

TWO MARINE BOILERS 7 years old in good order for sale cheap, 9¼ feet shell by 16 feet long for $1,000 each, ½ down balance one year, by
C. H. LANE, BUFFALO, N. Y.

FOR SALE—
A HANDY THREE-MASTED SCHOONER, well found and equipped, will carry 500 tons of coal, or 270 M feet of lumber. Rates, A 2½.
Also, a two-masted schooner; capacity, 425 tons of coal, or 250 M feet of lumber. Rates, A 2½.
Both these vessels have been well kept up and are most desirable investment. Apply to PARKER & MILLEN, Detroit, Mich., or to THE MARINE RECORD, Cleveland, O.

Notice to Vessel Owners.

I HAVE CUSTOMERS FOR several barges, both steam and tow, and would be pleased to hear from each and every owner having vessels for sale, giving name, capacity, draught of water, light and loaded. If steam, condition and age of boiler, size of engine, etc. Correspondence solicited direct from owner, as I will not divide commission. Address,
J. F. WHITTEMORE.
Agent and Ship Broker. Bay City, Mich.

FOR SALE.

TUG BOAT, STEAM YACHT, &c.

—AT—

Bell's Steam Engine Works,

BUFFALO, N. Y.

1 new Wooden Tug, 76 feet long, 15½ feet beam; engine 18x20, steel boiler 6 ft. 8 in. by 10 ft. 9 in.
1 steel and iron Steam Yacht 85 feet long, 14 feet 4 inches beam; compound engine 9x18, 12 in. stroke, independent condenser, with boiler all complete.
1 wooden steam yacht, "Little Mac," 60 feet long, 10½ feet beam; engine 8x9, Scotch steel boiler, 2 masts, and furnished all complete.
1 marine engine 20x22.
1 marine engine 14x16.
1 marine engine 14x14.
Apply as above. January, 1889.

FOR SALE.

SCHOONER FRANC MINER. Her dimensions are as follows: 68 feet keel, 17 feet beam, 5 feet hold, she has two masts and is three years old, in good shape, outfit and all. I also have a complete outfit for a tug or barge, engine 18 by 20, boiler 6½ by 14, shaft wheel and all complete For particulars write to L. NAU, Green Bay, or CAPTAIN J. A. CUSICK, Fort Howard, Wis.

WANTED.

SCHOONERS—20 to 40 tons, in good repair. Send full description and photo or drawing. Address,
B. C. LINDLEY,
Box 479. Traverse City, Mich.

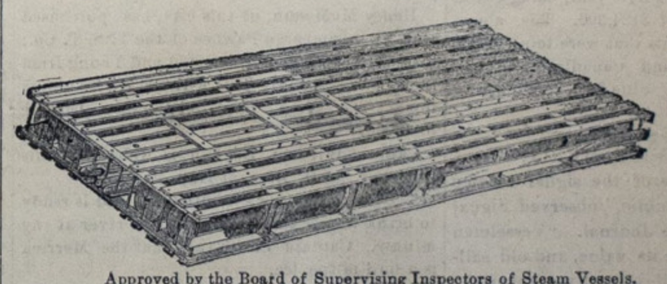
WANTED—TO BUY TWO TOW BARGES of about, 500,000 capacity, or two A 2 schooners. Address, CAPTAIN A. FLAGSTAD,
Montague, Mich,

UNITED STATES ENGINEER OFFICE, DETROIT, Mich., January 19, 1889.—Sealed proposals for excavating a lock pit for a new lock at St. Mary's Falls Canal, Michigan, will be received in triplicate at this office at 2 p. m., February 18, 1889, and then opened. Preference will be given to materials and plant of domestic production or manufacture, conditions of quality and price (import duties included) being equal. Attention is invited to acts of Congress approved February 26, 1885, and February 23, 1887, vol. 23, page 332, and vol. 24, page 414, statutes at large. The government reserves the right to reject any or all proposals. For further information apply at this office or at the U. S. Engineer office, Sault ste. Marie, Michigan. O. M. POE, Col. of Engineers, Bvt. Brig. Gen. U. S. A.

DETROIT BOAT WORKS

—SOLE MANUFACTURERS OF—

Clark's Patent Metallic Life Raft.



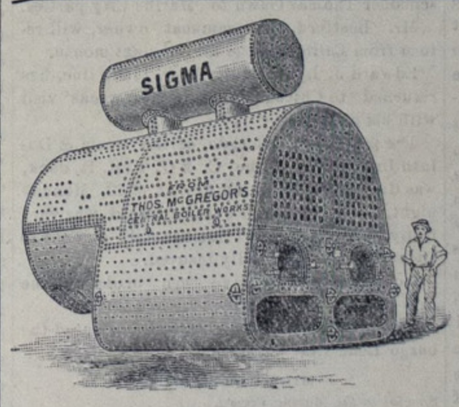
SIZES AND PRICES.

| Capacity, Persons. | Size. | Each. |
|---|---|---|
| 4 | 3' 2" x 5' 10" | $30 |
| 5 | 3 5 x 6 | 35 |
| 6 | 4 x 6 | 40 |
| 8 | 4 x 8 | 50 |
| 10 | 5 x 8 | 60 |
| 15 | 6 x 10 | 75 |
| 20 | 6 3 x 13 2 | 90 |
| 30 | 7 x 15 | 125 |
| 40 | 8 x 20 | 160 |

Approved by the Board of Supervising Inspectors of Steam Vessels.

☞Other Sizes and Proportions Made to Order.

Shops, foot Dequindre st. DETROIT, MICH.




Thomas McGregor,

CENTRAL BOILER WORKS

MANUFACKER OF

*Marine and Stationary*

BOILERS,

—ALL KINDS OF—

Rendering Kettles, Tanks,

—AND—

SHEET IRON WORK

FOR SALE.

Two Tugs and Three Marine Boilers.

Tug Uncle Sam.

Length 60 feet, beam 14 feet, depth 7 feet, draft 8 feet, engine 17 by 17; steel boiler 12 feet long, 5 feet 4 inches diameter, of ⅜ths plate, allowed 100 pounds of steam. Hull rebuilt in 1887. Price $5000.

Tug J. C. Ingram,

Length 54 feet, beam 15 feet 6 inches, depth 7 feet, engine 17 by 18, boiler 10 feet long, 5½ feet diameter, of ⅜ths plate, allowed 60 pounds of steam. Rebuift in 1885. Price $5000.

A Martne Steel Boiler,

17 feet long, 7 feet diameter, allowed 110 pounds of fteam, 6 years old, in good condition; price $800.

A Marine Iron Boiler,

14 feet long, 7½ feet diameter, allowed 80 pounds of steam, in good repair; price $400.

Marine Iron Boiler,

14 feet long, 5½ feet diameter, allowed 90 pounds steam, in good condition; price $300.
Apply to
DUNHAM TOWING & WRECKING CO.,
234 South Water St., Chicago, Ill.

FOR SALE OR EXCHANGE.

FOR STEAMBARGE, A NEW PASSENGER steamer, will carry 75 tons freight, allowed 115 passengers. Will sell on easy terms or exchange for steam barge. Address, BOX 90, Petosky, Michigan.

M. M. GLEKLER,

MANUFACTURER & DEALER IN

Cigars

AND

Tobacco.

156 River-st., Cleveland, Ohio

No one should leave port without a box of M. M. Glekler's marine cigars.

J. C. GOSS.

Sail Maker and Rigger,

20 and 22 Woodward Av.,

DETROIT - - MICH

LARGE STORAGE ACCOMMODATION FOR VESSEL OUTFITS.

Covering Bollers and Steam Pipes a Specialty

FOR SALE.

FISHING TUG suitable for light towing. New, in service but four months. Engine 9 by 10, Hull 48 feet long 11 feet beam. First class in every respect. Address,
H. BOX, Record Office.

FOR SALE.

BARGE COL. BRACKET—She carries 260M feet of lumber, 420 tons of coal. Had $900 worth of repairs last season. Fit out good. Price $1,600. Mention this paper. ED. J. KENDALL, Port Huron.

### THE FERRY STEAMER ST. IGNACE.

The railway lines reaching the straits of Mackinac cross to the upper peninsula of Michigan by ferry, which in winter has been much embarrassed and interrupted by heavy ice. The first attempt at crossing through the ice by steamer was made by the Algomah, a screw steamer, built especially for that service. She had a spoon-shaped bow which crushed the ice beneath her, and heavy machinery to force her through it, but proved a failure, owing to her inability to force a passage through the windrows of ice. It was found that the Algomah did her best work in broken ice by going astern, her propeller serving in a measure to clear her path. The idea gained by this was reduced to practicability by Frank E. Kirby, of the Detroit Dry Dock Co., and the result is the steamer St. Ignace. She is a double-ended steamer, having a heavy propeller, driven by an independent engine, at the bow, in addition to the usual one astern. She was completed late in March, and immediately set out for Mackinac. On Lake Huron she encountered 250 miles of ice, averaging about two feet in thickness, but in places piled to a hight of ten feet. This she passed through without any trouble, and was welcomed on arriving at her destination by almost the entire population of Mackinac city, who came out on the ice in sleighs to meet her. She has not had much work this winter that would test her ice-breaking powers very severely, though she is likely to have from this time on. Her ordinary cargo is 12 freight cars, and she makes the eight miles between Mackinac City and St. Ignace through two feet of ice in one hour. The Michigan Central ferry steamer Transfer, built last year at Cleveland at a cost of 325,000, to run between Detroit and Windsor, Ont., carries 21 freight cars.

### WORSE THAN DAMAGES.

About 10 o'clock of a dark night, as we were speeding down the river from Natchez, there came a sudden hail out of the darkness, and next instant our steamer crashed into a hoop-pole barge floating with the current, and having no light out, our wheel smashed the steering oar and made the splinters fly generally, and the boat had been checked before a single person on the barge appeared in sight. Then it was a bare-headed man, who had yelled at us with his head out of a cabin window. He was followed by a woman, but while he was terribly excited she took matters very coolly.

"What 'ere craft ar' that?" she demanded, looking up at us.

"The Lucy Jones," replied the captain. "Are you much damaged?"

"Damaged! Who's shoutin' 'bout damages?" she yelled "What I'm talkin' 'bout is your bumming along yere and tumblin' me outer bed, and, cap ain, I'll make ye holler if I have to foller ye all the way down to the ocean to git my hands in yer ha'r."—*Detroit Free Press.*

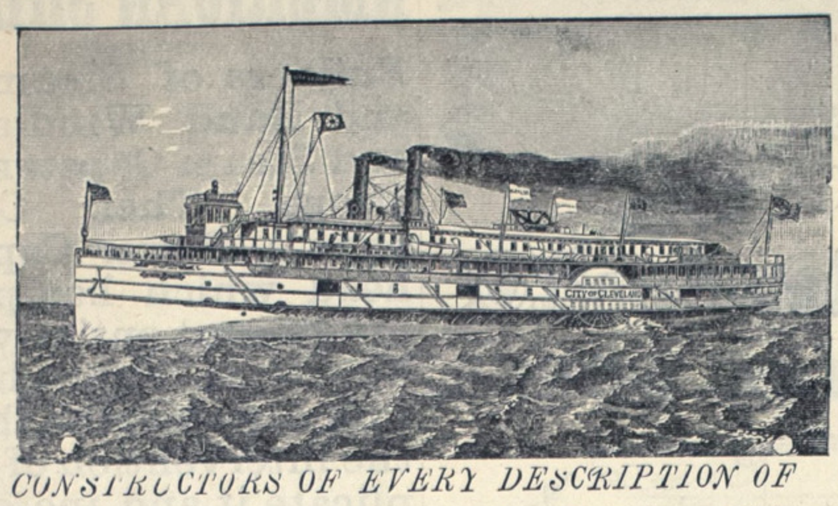
### OUR MERCHANT FLAG.

Additions to the fleet of American steamships: Two building for the New York and Cuba Mail Steamship Company; one for the Mallory Steamship Company; two for the Red "D" line, between New York and Curacoa; two for the United States and Brazil Mail Steamship Company; a magnificent steel steamer of 5,000 tons for the Pacific Mail Steamship Company, to ply between San Francisco and Hong Kong; one for Morgan's line; the steamer Connecticut, of the Long Island Sound fleet, for the Providence and Stonington Steamship Company, and a fine steamer, the Sandy Hook, for the New York and Long Branch Railroad Company. All will be American built save the ship for the Pacific Mail Steamship Company, which will be from a yard near Glasgow.

On January 14, says the Glasgow Herald, Mr. Charles Spinks exhibited in Leith Harbor a small working model six feet long, of a vessel with improvements in the construction of the propeller, which he has invented and patented. The vessel is constructed in the ordinary manner until toward the stern, where, instead of ending in a single keel, a double keel is formed, which completely encases the propeller, and on either side the keels are fitted with sluices, to be used as required. It is claimed that from the position of the propeller between the two keels, it can never be thrown clear of the water, consequently rendering it safer and greatly reducing the strain on engines and machinery, and also, from the protection so afforded, is not nearly so liable to accident as is the case with propellers as at present situated. It is further held that a higher rate of speed will be reached by the improvements. From the tests the vessel appeared to go as fast astern as ahead. In the case of going ahead by raising the starboard sluice, an additional motive power was gained by the rush of water though the apperture acting on the propeller as on a horizontal turbine, and on reversing the engine, by closing that sluice and opening the one on the port side, a corresponding accelaration of speed was the result in the backward movement.

All old subscribers are kindly invited to remit arrearages, and readers not subscribers will be made welcome to our list.


**DETROIT DRY DOCK CO.,**



*CONSTRUCTORS OF EVERY DESCRIPTION OF*

Steel, Iron, Composite and Wooden Ships.

IRON SHIP BUILDING WORKS AT WYANDOTTE, MICH

Dry Docks and Repair Yard, ft. of Orleans-st., Detroit, Mich.

**SAMUEL F. HODGE & CO.,**

MANUFACTURERS OF

MARINE,

Stationary & Portable Engines,

MINING MACHINERY AND

PROPELLER WHEELS,

Riverside Iron Works, 314 to 326 Atwater Street,

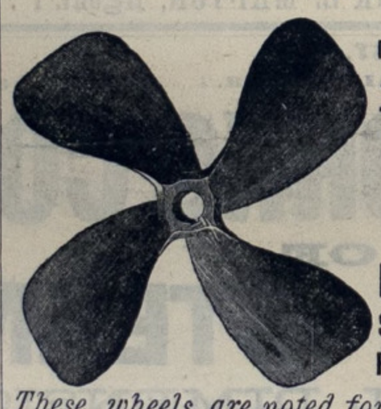
DETROIT, MICH.

**H. G. TROUT,**

**KING IRON WORKS,**

**BUFFALO, N. Y.,**

MANUFACTURER OF



Triple Expansion Marine Engines,

Three Cylinder and Fore and Aft and Steeple Compound Marine Engines,

High and Low Pressure Engines

SECTIONAL PROPELLER WHEELS,

PROPELLER, TUG & YACHT WHEELS

*These wheels are noted for their extra speed and towing power or aproportionate saving of coal.*

PRICES QUOTED ON APPLICATION.

**BOSTON & LOCKPORT BLOCK CO.,**

(Successors to BAGNALL & LOUD BLOCK CO.) BOSTON, MASS.

MANUFACTURERS OF THE CELEBRATED

Self-Adjustable Five Roll Roller Bushed

BLOCKS.

which for DURABILITY and STRENGTH, are far ahead of any other make. One trial will convince any one of their GREATER PURCHASE.

Be sure and call for the STAR BRAND in ordering your Blocks.

We call attention to our DIAPHRAGM PUMP, which will pump more water at each stroke and work easier than any other make in the market. Give it a trial.

YORK STORE, 33 South Street,

F. BALDWIN, Manager.

We also make a specialty of furnishing the handsomest style of blocks in the market for Yachts, with special designs to suit the place.

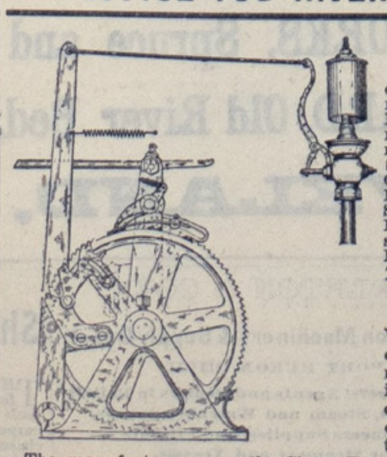
**ARTHUR & BOYLAN,**

Steamboats, Tugs, etc, Coaled Day and Night.

DEALERS IN LACKAWANNA ANTHRACITE COAL.

Woks: Ft. West River St., Whisky Island, C. P. R'y. Slip, Government Pier

OFFICE 130 RIVER-ST.. CLEVELAND, OHIO.



*Chase Fog Whistle Machine*

This machine has been placed on the following steamboats during the past year: SPOKANE, WALLULA, KASOTA, CHARLEMAGNE TOWER, JR, YAKIMA, MISSOULA, SITKA, FAYETTE BROWN, R. J. HACKETT, FOREST CITY, SPARTA, HAVANA, VIENNA, OSCAR TOWNSEND, CITY OF CLEVELAND HENRY CHISHOLM, SUPERIOR, E. B. HALE, M. B. GROVER, J. S FAY, R. P. RANNEY, SMITH MOORE, CHARLES J SHEFFIELD, IRA H. OWEN, CAMBRIA, CORSICA, J. H. OUTHWAITE, SAMUEL MATHER, R. R. RHODES, COLUMBIA, AURORA, OHIO, WM. EDWARDS, S. E. SHELDON, AUSTRALASIA, RALEIGH, BULGARIA, ROUMANIA, J. F. EDDY, HIAWATHA, THOS. ADAMS, A. P. WRIGHT, GLADSTONE, E. P. WILBUR, SOO CITY, E. M. PECK, ROBERT L. FREYER AND NORTHERN LIGHT,

*To the President and Board of Supervising Inspectors of Steam Vessels:*

Your committee to which was referred the "Chase Fog Whistle Machine" beg leave to report: "That we have carefully examined the same and find that it blows at regular intervals, being worked by the engine, thereby insuring regular and continuous blasts for any length of time that may be required and we recommend it or similar device to owners of steam as is as an additional safeguard to navigation.

H. S. LUBBOCK,
GEO. H. STARBUCK,
W. D. ROBINSON,
} Committee.

The manufacturers are the Chase Fog Whistle Machine Co., corner of Elm and Spruce streets, Cleveland, O.

TOLEDO, OHIO. MONTPELIER, OHIO. OAR MILLS

NEPTUNE ANCHOR WORKS.

**DEGRAUW, AYMAR & CO.,**

MANUFACTURERS AND IMPORTERS OF

CORDAGE OAKUM, WIRE ROPE

CHAINS, ANCHORS, OARS, BLOCKS

COTTON AND FLAX DUCKS, FLAGS

BUNTINGS, RUSSIA BOLT ROPE.

MARINE HARDWARE AND SHIP-CHANDLERS' GOODS GENERALLY.

Nos. 34 AND 35 SOUTH STREET, NEW YORK.

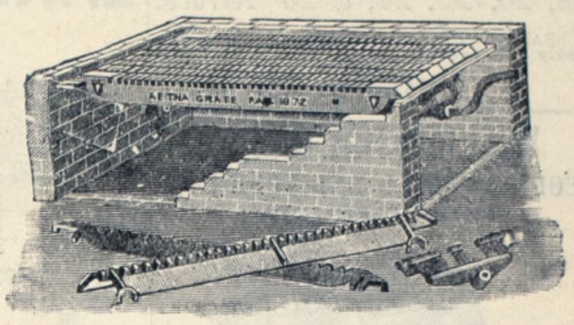
**THE ÆTNA GRATE.**

**G. C. BARNES, Agt.**

**This Improved Shaking Grate Especially Adapted to Burning Slack.**

Glob Iron Works, manufac's.,

Office and Foundry, corner of Elm and Spruce-sts., CLEVELAND, O.

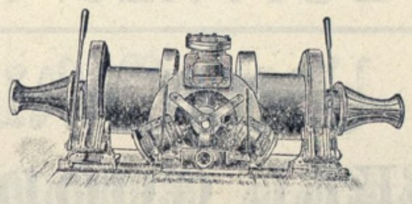



**R. DUNBAR & SON,**

—MANUFACTURERS OF—

Hoisting Engines, Single and Double Drums

FOR VESSELS & DOCKS.



Accompanying Cut shows our Double Drum Hoister, operated by ONE engine. Two hatches can be unloaded at once. Two machines in one, at low cost. Send for descriptive circular.

R. DUNBAR & SON,
BUFFALO, N. Y.

**H. B. & G. B. BURGER,**

**Ship-builders and Contractors.**

MANITOWOC DRY DOCK.

Dry Dock will admit Vessels of 1100 tons drawing 12 feet. Have also a set A Boxes in connection with the Ship yard capable of lifting Vessels of 350 tons. of large stock of SPARS CONSTANTLY ON HAND.

VESSELS DOCKED AND REPAIRED ON REASONABLE TERMS.

MANITOWOC, WIS.

**DETROIT BOAT WORKS.**

SOLE MANUFACTURERS OF

Clank's Patent Metallic Life Rafts.

HIGHLY INDORSED BY THE BOARD OF SUPERVISINGINSPECTORS.

**Yawl Boats** in stock 14, 16, 18, 20 and 22 feet long. **Life Boats** in stock 16, 18, 20 and 22 feet long.

Steam and Hand Steering Wheels to Order

Shops ft. of ORLEANS ST., DETROIT MICH.

**THOS. DREIN & SON**

BUILDERS OF

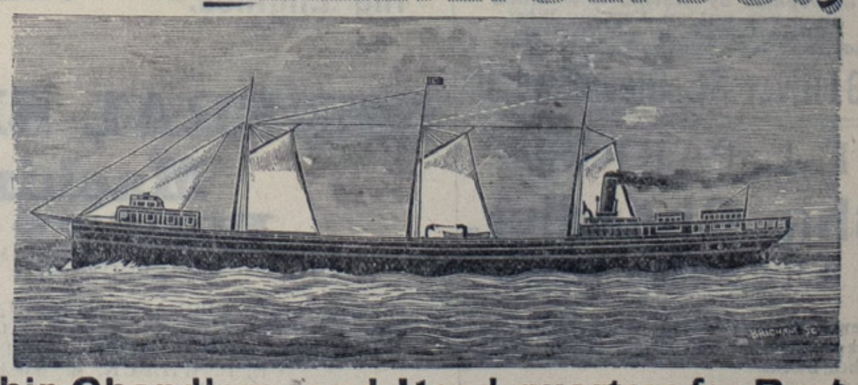
**METALLIC LIFE BOATS**

and LIFE RAFTS of all classes Government and Pleasure Boats of Wood. Block Cork Life Preservers. Sole manufacturer of Capt JONATHAN CONE'S celebrated

**Patent Life Rafts**

Fatnal and Railroad Wilmington, Del

**H. CHANNON CO.,**



**Ship Chandlers, and Head-quarters for Best Steel and Iron Tiller Ropes.**

24 to 26 Market-St. near Randolph-St., Chicago.

**J. E. SIMPSON & CO.,**

GENERAL CONTRACTORS.

*AND BUILDERS OF*

SIMPSON'S PATENT IMPROVED TIMBER DRY DOCK

NO. 35 BROADWAY, NEW YORK CITY.

**HOWARD H. BAKER & CO.**

Ship Chandlers & Sail Makers

WHOLESALE AND RETAIL DEALERS IN

Cordage, Wire Rope, Blocks, Canvas, Anchors, Chains, Paints, Oils, Naval Stores.

Cylinder, Lard, Signal and Lubricating Oils a Specialty.

AGENTS FOR THE

American Ship Windlass Company for Lakes Erie and Ontario.

Importers of Nautical Instruments of Every Description.

*18, 20, 22, 24, & 26 Terrace.*

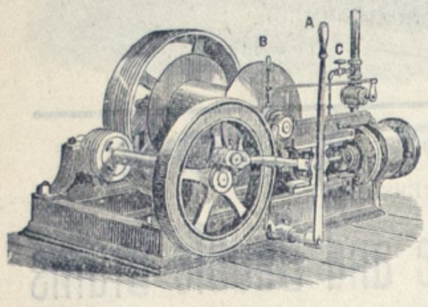
BRANCH STORE foot of Washington street (formerly D. S. Austin & Co.)

Buffalo, N. Y.

**WILLIAMSON BROS.**

COR. RICHMOND AND YORK STS.

PHILADELPHIA, PA.



HOISTING ENGINES AND SHIP STEERING ENGINES; with either Frictional, Spur or Worm Gear of various patterns to suit all purposes.

J. W. GROVER & SON,

SHIP CHANDLERS,

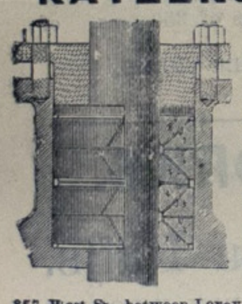
SAIL MAKERS AND RIGGERS

IMPORTERS AND WHOLESALE DEALERS IN

Wire Rope, Manilla, and Tarred Cordage, Canvas, Blocks, Oakum, Tar, Pitch, Oars, Anchors, Chains, etc.

116 & 119 RIVER ST., & 134 & 135 DOCK CLEVELAND, OHIO.

**KATZENSTEIN'S**



SELF-ACTING METAL PACKING

FOR PISTON RODS, VALVE STEMS, Etc.

Adopted and in use by the principal Iron Works and Steamship Companies within the last eight years in this and Foreign countries. Also flexible tubular metallic packing for slip-joints on steam pipes and for hydraulic pressure. For full particulars and references address

L KATZENSTEIN & CO

357 West St., between Leroy and Clarkson-st, N. Y.

CAPT. THOS. WILSON, who uses this packing on his Steamers, and THE MARINE RECORD are Agents for Cleveland and the Lakes.

**McKINNON BROS.**

Ashtabula Harbor, O.,

Machinists, Shipsmiths & Steamfitters;

ALSO, DEALERS IN

Engineers' Supplies, Lubricating and Burning Oils.

BUSINESS PROMPTLY ATTENDED TO.

**CAPT. GEO. A. SIMPSON,**

Compass Adjuster,

COMPASSES, BAROMETERS, PATENT LOGS AND MARINE GLASSES REPAIRED,

Schooners can have their Compasses Adjusted for Local Attraction at the time of repairs by stating how much they are out on East or West Courses, and which way it leads, North or South of above Courses

161 River St., Cleveland, O.

E. L. PARRISH,

**Ship Chandler,**

Sail & Awning Maker.

Sewell & Day's Boston Rope. Boston and Lockport Block Company's patent 5-roller Bushed Blocks.

35-37 Main st., - BUFFALO, N. Y.

TELEPHONE NO 314.

FOR SALE.

TUG DREADNAUGHT is offered by the undersigned for sale cheap. She is in good condition, has double engines, and it is well known that the machinery is as good as can be made. The boilers are allowed 100 pounds of steam. Inquire of

CAPTAIN THOMAS DOWLING,
248 Clinton st., Cleveland, O.

FOR SALE.

THE OWNER of a one third share in a fine handy steambarge 200 tons net, wishes to dispose of his interest. She is in good order and condition, and was doing work up to the middle of December. Her present valuation is $13,000 classed B 1 For further particulars, inquire, MARINE RECORD, Cleveland, O

ESTABLISHED 1847

**Thomas Quayle's Sons,**

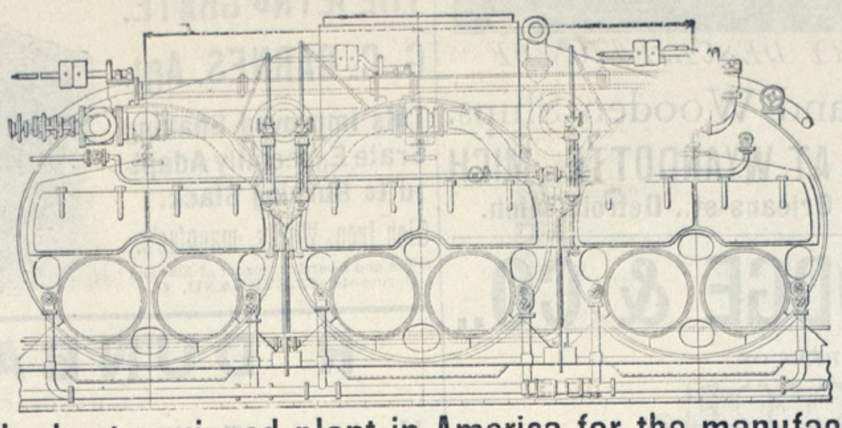
OFFICE & WORKS CENTRAL WAY

SHIP BUILDERS.

Thos. E. Quayle,
George L. Quayle,
Wm. H. Quayle.

Cleveland, O.

**LAKE ERIE BOILER WORKS.**



The best equipped plant in America for the manufacture of Modern Marine Boilers.

BUFFALO, NEW YORK

**URSON, WALTON & CO.**

**SELL GOOD ROPE AT FAIR PRICES**

Agents for the American Ship Windlass Co., Williamson Bros. Steam Steerer, Drein Metallic Life Boats.

159 AND 163 RIVER-St., CLEVELAND, O.

Established in 1857.

**AMERICAN SHIP WINDLASS CO.**

Builders of Steam, Messenger Chain and Hand Windlasses, Power, Crank and Steam Capstans, Wharf and Ferry Drops. Their Capstan Windlasses have a Power Capstan with a single head which has power and speed arrangement entirely independent of th Windlass, and which makes a direct connection with the Windlass without the intervention of any gearing to complicate it and inc ease the friction.

In all their styles of Steam Windlasses they make a direct connection between the engines and the windlass without counter shafts or additional gearing. This saves friction and liability to break down, and conduces to durability and ease in operating. They also have a counterbalance for the engines and an automatic lubricator for worm and worm gear, and the engines are placed together in the most accessible position. The above improvements and others too numerous to mention, but which are familiar to Masters, Owners and Builders, are covered by Patents owned exclusively by this Company. For plans and information

Address,

FRANK S. MANTON, Agent. P. O. box 53, Providence, R. I.

H. M. HANNA, PRESIDENT. JOHN F. PANKHURST, VICE PRESIDENT AND GENERAL MANAGER. LUTHER ALLEN, SECRETARY AND TREASURER

**THE GLOBE IRON WORKS COMPANY**

BUILDERS OF

**IRON AND STEEL STEAMSHIPS**

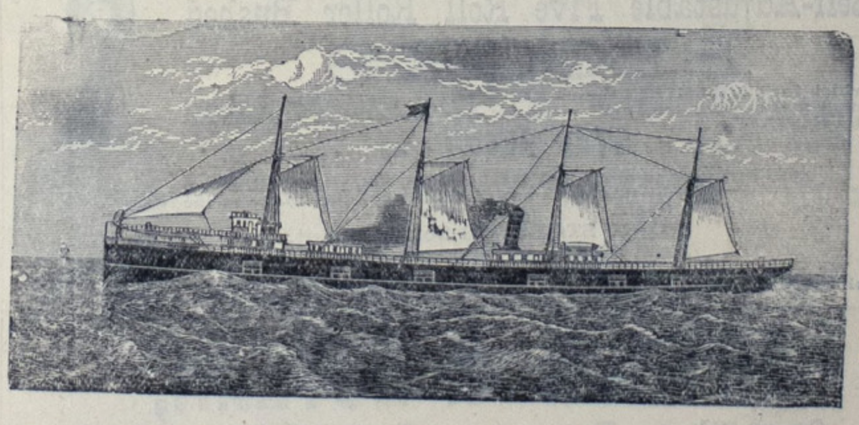
AND VESSELS OF ALL DIMENSIONS.

Triple Expansion, Compound, High Pressure and Low Pressure

**MARINE AND STATIONARY ENGINES,**

**MARINE, STATIONARY & PORTABLE BOILERS.**

Blast Furnace and Rolling Mill Machinery, Hoisting and Pumping Engines, Portable Hoisting Engines.



Steam Pumps, Steam and Hand Windlasses, Winches, and Marine Appliances of Every Description.

**GENERAL SHEET AND PLATE IRON WORKERS,**

**Machinists, Boiler-Makers and Founders.**

Builders of

IRON STEAMSHIPS ONOKO, WILLIAM CHISHOLM, J. H. DEVEREUX, ETC.

STEEL STEAMERS SPOKANE, CAMBRIA, CHAS. J. SHEFFIELD, IRA H. OWEN, CORSICA, CORONA, NORTHERN LIGHT, NORTH WIND, NORTHERN KING, E. P. WILBUR, S. SWAIN.

PASSENGER STEAMER DARIUS COLE, AND STEAM YACHT TWILIGHT.

IRON TUGS INTERNATIONAL AND RECORD.

OFFICE & WORKS, Spruce and Elm Streets.

IRON SHIP YARD, Old River Bed, foot of St. Paul St

**CLEVELAND, OHIO.**

Established in 1859.

**HENRY LEOPOLD.**

Manufacturer and Dealer in all kinds of fine and plain

*FURNITURE & UPHOLSTERY,*

Mattrasses and Vessel Furniture

A SPECIALTY.

Warerooms 798 and 800 Lorain-st., near Fulton. Factory 10 Willet-st.

CLEVELAND, OHIO.

**Cleveland Dry Dock Co,**

Shipbuilding, Drydocking, Repairing and Spar Making.

CLEVELAND, OHIO.

CARLETON & COLE,

Port Huron Machinery & Supply Depot,

PORT HURON, MICH.

Manufacturers' Agents and Dealers in Boilers, Engines, Steam and Wrecking pumps, Engineers Supplies, and Fit-outs for Steamers and Vessels.

*405 and 407 Water St., East.*

**Shipyard for Sale or Rent.**

THE LOOMIS SHIPYARD AT ERIE PA., IS OFfered for sale or rent, including all materials tools and good will. A first class opening for a ship carpenter with moderate capital. Terms to suit purchaser. If not disposed of as a whole, will sell tools materials, etc., in lots to suit. For inventory, terms etc., apply at MARINE RECORD office, or to D. L. HUBBARD, Erie, Pa.